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PRACTICAL EXPERIENCES WITH BERIBERI AND UNPOLISHED RICE IN THE PHILIPPINES *

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The advances made during the past year in placing the etiology of beriberi on a scientific basis have now proceeded far enough to warrant the inference that prophylactic medicine has the knowledge at its command to place this scourge among the preventable diseases.

While it has been possible to control outbreaks of beriberi in public institutions in the Philippines during the past ten years by reducing the rice in the diet and replacing it with meat, vegetables, mangoes, etc., yet it was not until the 1910 meeting of the Far Eastern Association of Tropical Medicine that a rational method for the prevention and cure of the disease became available. This was due to the papers on this subject read at the meeting, especially those presented by Foster and by Aron.

Briefly, it will be remembered that these authors showed by experimental data that beriberi in man and polyneuritis in fowls could be caused by using, as the staple article of diet, rice from which the outer portion or pericarp had been removed; and that, unless advanced degeneration of the nerves had occurred an immediate amelioration of the symptoms took place when rice with the pericarp, or its equivalent, was substituted.

Numerous analyses of rice sold in the Manila market have been made by Dr. Aron, and these showed that Saigon rice Number 2, and locally polished rice almost invariably contained less than 0.4 per cent. of phosphorus pentoxid. (It is desired here to digress for a moment for the purpose of stating that the amount of phosphorus in rice is given only because it is a ready method for determining the degree of polishing that a given rice has undergone; in other words, it is a laboratory method of ascertaining whether much or little of the pericarp has been removed and at this time it cannot be said that the lack of it causes beriberi.) Unpolished or slightly polished rice was found to contain from 0.5 to 0.75 per cent. of phosphorus pentoxid.

Since the opening of the Culion Leper Colony in 1906, rice has been the staple article of diet, and it was customary to use either Saigon rice Number 2, or local polished rice. Beriberi was more or less continuously present until February, 1910. By substituting meat and mangoes for rice it was always possible to reduce the number of beriberi cases, but the disease was never completely eradicated. It was found later that this failure was probably due to the fact that many of the lepers preferred to deny themselves food rather than eat mangoes, so that the authorities had starvation as well as improper diet to deal with.

The total number of deaths at Culion by months from February, 1909, to February, 1910, among an average population of 1,537, was as follows: February, thirty-nine; March, fifty-four; April, fifty-two; May, forty-seven; June, forty-eight; July, fifty-seven; August, sixty-one; September, sixty-five; October, forty-three; November, eighty; December, 188; January, 164; or a total of 898; of this number a total of 309 were due to beriberi.

In February, 1910, the use of unpolished rice was made compulsory for all inmates of the Culion Leper Colony.

The total number of deaths by months from February, 1910, to February, 1911, among an average population of 1,952, or a 27 per cent. greater population, was as follows: February, sixty-six; March, thirty-six; April, twenty-nine; May, twenty-two; June, twenty-seven; July, fifteen; August, twenty-four; September, twelve; October, thirteen; November, fifteen; December, fifty-eight; January, fifty-two; or a total of 369, a reduction in the deaths of over one-half.

Of this number there were no deaths from beriberi after February, 1910. The increased death-rate in December and January was due to an acute outbreak of bacillary dysentery, or even a better showing would have resulted.

At the end of January, 1910, there were approximately fifty patients with beriberi undergoing treatment in the Culion Hospital. On the suggestion of Dr. Aron, 15 grams of rice polishings mixed with milk and sugar were given to these patients twice daily. Two patients in very advanced stages of the disease died within a few days after this treatment was begun; all the others began to improve. Within two weeks half of the number were able to leave the hospital, and within four weeks every patient with beriberi was reported as cured by the attending physicians of the hospital. So much for Culion.

Prior to May, 1910, beriberi was very common throughout the Philippines—in jails, lighthouse stations, charitable institutions, on Government vessels, and among the Filipino troops of the U. S. Army. An investigation has shown that it was the invariable practice to use polished rice as the staple article of diet in all of the places mentioned. In May, 1910, an executive order was issued by the Governor-General of the Philippine Islands prohibiting the use of polished rice

* Read at the eighth annual meeting of the Philippine Islands Medical Association, Manila, P. I., Feb. 23, 1911.

in all public civil institutions. Since August, 1910, only two cases of beriberi in the above places have come to my attention. One of these was among the crew of the steamer *Rizal*. An inspection of the ship's stores showed that the crew's rice was of the white polished variety. Further inquiry elicited the fact that it was customary for most of the crew of this vessel to use a varied diet, which may account for the fact that there were not more cases. The other case occurred in a prisoner in the Tacloban jail. The physician in charge reported that it had not been possible to purchase unpolished rice at Tacloban and for that reason polished rice was being used. He added, however, that every effort was being made to comply with the spirit of the executive order by using more meat, mangoes, potatoes, green vegetables and fish.

At the Hospicio San José, which is an insane hospital, orphan asylum and asylum for the aged, of over 700 inmates, beriberi had been constantly present at least during the past ten years. Since June, 1910, unpolished rice has been used and a few weeks afterward beriberi disappeared, and since then no further cases have been reported.

Extensive inquiry made throughout the Philippine Islands has almost invariably shown that in districts in which hand pounded or, in other words, unpolished rice is commonly used, there is little if any beriberi; whereas in districts in which machine or polished rice is used as the staple article of diet, beriberi is common. An apparent exception to this general rule is found, however, among the residents of the Batanes Islands. It may be mentioned that these are isolated islands north of Luzon and south of Formosa which have communication with the outer world only a few times each year, and owing to their inaccessibility they generally escape visitations of cholera and many other dangerous communicable diseases.

The Batanes are poorly adapted to rice culture, and for this reason considerable polished rice is imported each year, and it would seem reasonable to infer that if the present theories with regard to the etiology of beriberi are correct cases of this disease should be encountered. An investigation of the dietary of the inhabitants of these islands shows, however, that meat and potatoes are more commonly used than in other parts of the Philippines. In brief, food of various kinds, other than rice, is so plentiful that rice is not the staple article of diet to the same extent as it is elsewhere in the archipelago.

Considerable difficulty has been encountered and much opposition has resulted from the attempt to introduce unpolished rice on a large scale in the Philippines. When the Army and the insular government entered the market to purchase large quantities of unpolished rice it developed that the dealers were unable to supply the demand, because managers of rice mills refused to adjust their process of manufacture to meet the new requirements. This resulted in large quantities of rice being used that came from the mills immediately after it was husked.

The machines that are used locally for this purpose let many of the smaller rice grains pass through without the husks being removed from them. Previously such rice went directly to the polishing machine which not only polished the rice, but removed the husks from such grains as still retained them, so that the finished product was clean. It was apparent then that much of the unpolished rice that was issued in the beginning was not very clean and contained many husks. This gave rise to much complaint among those who were required to use it. It was frequently alleged that the husks tickled the throats and often caused gastritis. On investigation, no reliable evidence as to the gastritis could be obtained. Commissary officers, prison wardens, and others who were directly charged with carrying out the orders to use unpolished rice, were constantly besieged with complaints and it was but natural that they should take the course of least resistance and recommend that its use be discontinued. To add to the difficulties of those who were insisting on the use of unpolished rice, the rumor spread that unpolished rice when stored in bulk soon spoiled, thus causing great financial loss. Investigation of this matter showed that there was no reason to believe that unpolished rice, when stored under the same conditions as polished rice, spoiled more quickly.

A campaign of education was then begun. Dr. Aron frequently went to the rice mills in person and was invariably able to demonstrate that rice could be rendered clean and free from husks without polishing it to a degree that would be harmful. Similar work, with like results, was accomplished by Highet in Siam, so that it may now be said that clean, unpolished rice, satisfactory in appearance, can be obtained in the Philippines and abroad, and that the original objections to its use no longer exist.

By January, 1911, so much evidence had accumulated that unpolished rice was an important factor in the prevention of beriberi that it was deemed most desirable to bring about its general use in the Philippines, for a few years at least, in order to test the theory thoroughly. At the most, no harm can result, and on the other hand there is every promise that many hundreds of lives may be saved and a still greater morbidity avoided. Experimental investigations made by Dr. Aron showed that a rice which has only been polished to a point where it still contains 0.4 per cent. of phosphorus pentoxid may be regarded as incapable of producing beriberi. Almost coincidently, similar conclusions were announced by Highet.

For purposes of convenience, then, a rice that contains less than 0.4 per cent. of phosphorus pentoxid is regarded as polished rice, and that which contains a greater percentage of phosphorus pentoxid is regarded as unpolished rice.

Accordingly, a bill was drafted which had for its purpose the bringing about of the general use of unpolished rice in those places where rice was the staple article of diet. After considerable discussion with physicians, lawyers, legislators and others, it was deemed advisable to attempt this with a law that would impose a tax of 5 centavos (2½ cents U. S. currency) per kilo on all polished rice sold, whether foreign or domestic.

Owing to the fact, however, that the legislature adjourned during the early days of February, there was not sufficient time to present this matter to both of its branches.

On account of the successful experience with unpolished rice in the prophylaxis of beriberi in the Philippines during the year, and since these data confirm the work of Fraser, Stanton, Aron, Kilbourne, de Haan and Highet, as reported at the last annual meeting of the Far Eastern Association of Tropical Medicine, it is believed that the time has come for the medical profession to aid in completing the last step in the test which promises to place another weapon in the hands of prophylactic medicine for the eradication of another of the world's serious and costly diseases.

XUM

THE RELATION OF PREMENSTRUAL FEVER TO PULMONARY TUBERCULOSIS:

A STUDY OF ONE HUNDRED CASES *

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In 1861 Fiedler[1] drew attention to definite rises in temperature occurring with anomalies in menstruation, particularly dysmenorrhea. He noticed that fever occurred one or more days preceding the menstrual period and disappeared rapidly with the onset of the menses. He called this "menstrual fever" and thought that it was due to an anomaly in menstruation, but not to an inflammatory process. At times since, physiologists have studied the changes occurring in the circulation, temperature and metabolism associated with menstruation; gynecologists have seen an increase in inflammatory pelvic conditions, or a lighting up of those which had been seemingly latent at this time, and finally, internists have noted the influence of menstruation on pulmonary tuberculosis, particularly the aggravation of subjective symptoms and an increase in the physical signs and temperature changes (F. Neuman[2]). Macht[3] has recently published a review and a careful study of the history of the subject and has indicated the relation between menstruation and tuberculosis, from the point of view of physiology and internal medicine. He states that the heat-regulating apparatus in woman seems to be peculiarly unstable at the time of menstruation; that those who have studied the temperature charts of tuberculous patients at this time have been impressed by the constancy and regularity of these periodic menstrual exacerbations in temperature which seem to differ only as to the frequency of occurrence. The difference in figures, he believes, is due to carelessness in temperature observations, and to disregard of relative rises in temperature; he quotes Mantoux,[4] to the effect that fever may exist without hyperthermia. Macht studied forty cases and states that 50 per cent. showed periodic monthly exacerbations. The cases are not given in any detail whatever and some of the patients were, furthermore, being treated with tuberculin at the time of observation. He finds that rises in temperature may occur in early, as well as in advanced cases, and in the former, are of diagnostic importance. In an extended experience with tuberculosis patients, I was quite unable to substantiate the observations made by Macht, or indeed those of any of the other observers, including Riebold. I consider it of interest, therefore, to add the facts gathered from our patients to indicate the variant findings. Before turning to the cases to be reported a review of the literature directly related to this phase of the subject may be of interest.

In 1899 Turban[5] described a temperature curve with a rise preceding the menstrual period by three to five days and a depression following it. Nine years later he (Turban[6]) presented curves showing premenstrual, intermenstrual, menstrual and postmenstrual temperature rises. The first mentioned he considered diagnostically the most important. Without giving the criteria for his observations he mentions that seventy-three of 100 tuberculous women showed this premenstrual fever on several occasions. Following Turban, Saugman,[7] Sabourin,[8] Kraus,[9] and Jessen[10] laid stress on the fact that premenstrual fever lent evidence to the existence of pulmonary tuberculosis.

Riebold[11] made careful studies of the periodicity of menstruation, the relation[12] between menstruation and ovulation and their influence[13 14] on disease. He believes that menstruation is dependent on ovulation, and usually follows this by one, two, or three days; that ovulation, not menstruation, is the process which is strongly periodical and that the periodicity in woman's life processes is dependent on it. The question whether this characteristic periodicity is inherent in the actively functionating ovary, or whether external, special cosmic influences play a rôle, he thinks must remain for the present unanswered. He advances the theory that during ovulation certain secretions reach the circulation and that these cause an increase in nervous and psychic irritability, increase in blood-pressure and vital energies, general heightening of metabolic processes, and an accompanying vigorous hyperemia of internal organs and activity of lymph-flow. During such a period of increased physiologic activity, the opportunity is offered for resorption from old infectious foci, for the lighting up of latent processes, or for an increase in activity of acute infections already present, which thus become the cause of premenstrual fever. He has later shown from a study of a large series of cases, that premenstrual rises in temperature occur in a great variety of diseases, such as acute infectious diseases, anginas, gynecologic and neurologic conditions.

I have for some time been impressed by the absence of this so-called premenstrual fever in cases of definite pulmonary tuberculosis. The mention in the literature of its frequent occurrence and the emphasis placed on its diagnostic significance led to the study of the following 100 cases. These cases were observed at Bedford, N. Y., in a sanitarium, in which the hygienic conditions were especially favorable. The sanitarium is devoted to the treatment of tuberculous patients only. The patients were under constant observation; a few were confined to bed, but the majority were up and about. Of these 100 cases forty-seven were incipient, thirty-nine moderately advanced, fourteen far advanced, classified according to National Association classification.[15]

* From the Montefiore Home Country Sanitarium, Bedford Station, Westchester County, N. Y.

1. Fielder: Die Verhältnisse der Körperwärme in verschiedenen fieberhaften Krankheiten; Manuskript, 1861-2; quoted by Riebold, Deutsch. Arch. f. klin. Med., 1908, No. 93, p. 15.
2. Neuman, F.: Beziehung zwischen Menstruation und Lungentuberkulose, Berl. klin. Wchnschr., 1899, No. 21.
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4. Mantoux: Revue de la Tuberculose, October, 1905.
5. Turban, K: Beiträge z. Kenntnis d. Lungentuberkulose, 1899.
6. Turban, K.: Menstruation und Lungentuberkulose, Verhandl. d. 25 Kong. f. inn. Med., 1908.
7. Saugman: In von Schröter und Blumenfeld's Handbuch der Therapie der chronischen Lungenschwindsucht, 1904.
8. Sabourin: La fièvre menstruelle des phthisiques, Revue de méd., March, 1905.
9. Kraus, H.: Ueber praemenstruale Temperatur-Steigerung bei Lungentuberkulose, Wien. med. Wchnschr., 1905, No. 13.
10. Jessen: Lungenschwindsucht und Nervensystem, Monographie Jena, Fischer, 1905.
11. Riebold, G.: Der Nachwais des Vorhandenseins somatischer Perioden in weiblichen Organismus und ihrer Abhängigheit von kosmischen Perioden, Arch. f. Gynäk., 1907-1908, lxxxiv, 182.
12. Riebold, G.: Ueber die Wechselbeziehungen zwischen dem Ovulationsvorgang inkl. der Menstruation und inneren Krankheiten, München. med. Wchnschr., 1907, No. 38, p. 1868; No. 39, p. 1935.
13. Riebold, G.: Ueber periodische Fieberbewegungen mit rheumatischen Erscheinungen bei jungen Mädchen, Deutsch. Arch. f. klin. Med., April 24, 1908, p. 15.
14. Riebold, G.: Ueber praemenstruelle Temperatur-Steigerungen, Deutsch. med. Wchnschr., 1907, Nos. 11 and 12.
15. Classification adopted by National Association for Prevention and Study of Tuberculosis: *Incipient:* Slight initial lesion in the form of infiltration limited to apices or a small part of one lobe. No tuberculous complications. Slight or no constitutional symptoms. Slight or no elevation of temperature or acceleration of pulse at any time during the twenty-four hours, especially after rest. Expectoration usually small in amount or absent. Tubercle bacilli may be present or absent. *Moderately advanced:* No marked impairment of function either local or constitutional. Localized consolidation moderate in extent, with little or no evidence of destruction of tissue or disseminated fibroid deposits. No serious complications. *Far-advanced:* Marked impairment of function, local and constitutional. Localized consolidation intense; or disseminated areas of softening; or serious complications.

XUM

The average period of observation was nine months. Rectal temperatures were taken in all but one case. The sputum in ninety-two of these 100 cases contained tubercle bacilli; of the 8 remaining patients, the evidence for pulmonary tuberculosis was:

CASE 1.—Patient aged 13. Six members of immediate family and one cousin had tuberculosis. Physical examination showed bilateral apical dulness and diminished breathing, more marked on left side. Intracutaneous and von Pirquet reactions were positive. No expectoration; laryngeal smear negative.

CASE 2.—Patient aged 38. Non-tuberculous family history. A history of five years of weakness and cough; five months before admission, blood tinged sputum; slight dulness and shrinkage at right apex; diminished expansion at right base; ophthalmic, von Pirquet and intracutaneous reactions positive.

CASE 3.—Patient aged 18. Non-tuberculous family history; gradually increasing weakness for one and one-half years; cough; thoracic pain; lowering of right shoulder; dulness, increased voice and increased muscular resistance at right apex. Reaction to 7 mg. of Koch's old tuberculin to 102 F.

CASE 4.—Patient aged 16. Non-tuberculous history; hemoptysis on two occasions; dulness, diminished expansion and crackling râles at right base; intracutaneous, von Pirquet and ophthalmic reactions positive; 0.5 mg. tuberculin produced a rise of temperature to 101.4 F.

CASE 5.—No history of exposure to tuberculosis; history of two years' cough; expectoration and pain in chest; dulness at right apex, with a few scattered râles to second space; dulness, diminished tactile fremitus, diminished expansion and a few moist râles at right base; intracutaneous reaction positive.

CASE 6.—No history of exposure to tuberculosis; bilateral apical dulness; few fine râles at right first space; von Pirquet and intracutaneous reaction positive; reaction to 5 mg. tuberculin to 102.2 F.

CASE 7.—Patient, aged 19. No history of exposure to tuberculosis; cough persisting after influenza; dulness and fine râles at left apex anteriorly and posteriorly; injection of 0.5 mg. tuberculin caused rise in temperature to 101 F.; locally moist râles at left supraspinous fossa; injection repeated with similar results.

CASE 8.—Patent aged 21. No exposure to tuberculosis; hemoptysis two years ago; weakness, cough, slight expectoration, anorexia; dulness and dry râles after cough at right apex; impaired resonance, prolonged expiration and shower of fine râles at end of inspiration at left base; von Pirquet and intracutaneous reactions positive.

There are, then, ninety-two cases with demonstrated and eight with very probable pulmonary tuberculosis.

In ninety-six of these 100 cases, there was no evidence of premenstrual fever; i. e., no rise in temperature occurring within five days preceding the onset of a menstrual period. Neither did the patients show any elevation of the minimal temperature described by Saugman;[7] that is, an elevation of the lowest point in the diurnal temperature while still remaining below normal. The intermenstrual fever, described by von Voornveldt,[16] that is, a rise in temperature occurring thirteen to fourteen days after the onset of the preceding menstrual period, thus falling in the interval between two normal menses, was never present in my series. The four remaining cases, however, did show a rise in temperature; in detail they were as follows:

CASE 9.—R. G., aged 16, single; case moderately advanced; observed twelve months, sixteen days; menstruated twelve times while under observation, and presented two premenstrual rises: (a) four days before menses, a rise from usual temperature of 99.5 F. to 101.6 F. for twenty-four hours; (b) three days before menses, rise to 103.2 F. for twenty-four hours.

CASE 10.—L. K., aged 17, single; case moderately advanced; observed eleven months, twenty-three days; eleven periods; two premenstrual rises: (a) rise to 101 F. on third and fourth days before menses; usual temperature 99.2 F. to 99.8 F.; nine days preceding this same period, a rise to 100.8 F. had occurred; (b) rise to 101 F. twenty-four hours before menses; eight days preceding this a rise to 101.6 F. had occurred.

CASE 11.—L. F., single; case incipient; tubercle bacilli in sputum; observed twelve months, twenty days. During this period the patient menstruated fourteen times; seven times preceding the onset of menstruation by twenty-four hours to forty-eight hours, and once, on first day of menstruation, her temperature reached 100 F. On eleven other occasions her temperature reached 100 F. and bore no relation to her menstrual period. A mitral and aortic endocarditis was a complication in this case. It is doubtful, therefore, whether an interdependence between the menstruation and tuberculosis can be maintained.

CASE 12.—S. P., aged 20, married; case moderately advanced; observed nine months. A rise in temperature to 101.6 F. forty-eight hours preceding her menstrual period occurred on one occasion. It is interesting to note that just at this period the patient had a breast abscess.

It appears, therefore, that in the 100 cases of pulmonary tuberculosis, in all stages of the disease, here reported, only two uncomplicated cases of premenstrual fever occurred. It has been shown in a large series of cases (2,000)[14] that similar rises may occur in a large number of unrelated conditions. The proportion in which the rises occurred in my cases is out of all proportion to that assigned to it in literature; so I am forced to conclude that far too great stress has been laid on the incidence of premenstrual fever in tuberculosis. The theory of Riebold, which refers to the relation of ovulation to premenstrual fever, in dormant disease, is one which commends itself, but for which sufficient evidence is not yet present.

I wish to express my thanks to Dr. Kramer for aiding in the compilation of the statistics.

16. Von Voornveldt: Ztschr. f. Tuberk., 1905, p. 543.

LEAD-POISONING IN ILLINOIS

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INTRODUCTION

Lead-poisoning in the United States is almost an unknown subject. Go through the literature and you will find here and there the report of an unusual case, an occasional compilation in a text-book, the material for which has had to be drawn from foreign sources; no experimental work, little study of the newer methods of diagnosis and no effort to gather statistical material or to bring the disease under the control of sanitarians.

When we began the study of the lead trades of Illinois we were assured that conditions here were very different from conditions in Europe; that lead-poisoning was a rarity, owing to our superior methods in industry. We found the reverse to be true. There is far more lead-poisoning in Illinois than in the same trades in England and Germany; at least in all those trades in which it has been possible to obtain anything like accurate figures. Far from being safer, American methods are often more dangerous than European, and while the German and English workman is not only better protected, but is under the supervision of an experienced physician, the American workman is, as a usual thing, under no medical supervision at all.

We found, in addition to the greater dangers arising from our methods of work, a very general ignorance of the hygiene of the lead trades on the part of the employ-

ers. In Europe and England employers have been carefully trained in industrial hygiene, but here they have been taught nothing. The result is a mortifying contrast between our industrial morbidity rate and that of other countries.

The fundamental difference does not lie in the attitude of the American employer as compared with his European brother. A perusal of Parliamentary blue-books shows that English employers in the lead trades have been just as vigorous in their objection to outside control of their factories as Americans could be. Nor does it lie primarily in the difference between the two classes of employees, although the isolation of the foreign-born workmen in America, the class who fill our lead industries for the most part, has undoubtedly something to do with their neglected state.

The great contrast appears when we look at the attitude of the medical profession in Europe. There the health of the working classes, the problems of trade diseases, have been and are still studies worthy to engage the best intellects; here, we leave them to a few overworked practitioners with no leisure to use their material. There, it is the medical man who gathers statistics showing the prevalence of lead-poisoning, who outlines the necessary reforms, and gets them embodied in the shape of laws. We find in this field such men as Brouardel, Sommerfeld, Pieraccini, Glibert, Teleky, Rambousek, to mention only one representative from each country. Here it would be difficult to point to any activity on the part of the medical profession. The American Medical Association has never had a single session devoted to the diseases of industry.

It is this very general neglect of one of the most prevalent of trade diseases which has induced me to try to present the results of a study of industrial lead-poisoning in one state, in the hope that by calling attention to the many and varied industries in which lead is used, the lack of protection against lead-poisoning in American factories, and the large numbers of men poisoned, the medical profession may be induced to take that interest in the question without which no reform can be hoped for. The admirable results obtained in England and on the Continent show that much of the lead-poisoning in industry is avoidable.

STATISTICS GATHERED IN ILLINOIS

It is difficult to give the exact number of trades which involve the use of lead, because the classification of trades may be made in so many different ways. One can count manufactured articles, or processes in the manufacture of articles. If we follow the latter method, which was Layet's when he computed that in France 111 industrial processes involved the use of lead, we shall find on our list some seventy industrial processes in Illinois in which lead or its salts are handled and which have caused lead-poisoning in recent times. The list is far too long to give in full, but it may be of interest to mention some of the more unusual industries, such as making and selling wall-paper, polishing brass, polishing nickel, finishing cut-glass, cabinetmaking carried on in the same room with the sandpapering of white lead paint; holding lead-covered nails in the mouth while shingling a roof; working with aluminum foil (7 per cent. lead) in lithography; zinc-smelting; making ornamental tiles (with a non-fritted lead glaze); wrapping cigars in tin-foil; enameling bath-tubs; laying electric cables; stopping the inequalities of wood with white lead in making automobiles; assembling and recharging old storage battery plates; polishing handles of coffins.

That it was difficult to find individual cases, anyone who has attempted to compile statistics of this sort will readily understand. The physicians interviewed could often give valuable information, but seldom remembered the details of single cases, and I can recall but four, three of them foreign-born and trained, who kept written records, other than financial, of their cases. Consequently the 578 individuals on our list represent only a fraction of the real number, but as the record stands it is very startling when one compares it with the records in other countries. In the English and German reports we have statements based on the careful medical inspection of each man employed, repeated once a week or once a month, according to the danger of the trade. Our figures are based on the study of hospital and dispensary[2] records and on the statements of some of the physicians, not nearly all, of course, whose practice is drawn from the workers in the lead trades. Considering the necessarily incomplete character of our figures, one would expect them to fall far below those of England and Germany, but the reverse is true.

WHITE LEAD

One of the large white lead factories in England employs 182 men. No man was poisoned there during the year 1910. A Düsseldorf factory had two cases of lead-poisoning among 150 men during the same year. On the other hand, an Illinois factory with about 142 employed throughout the year had twenty-five cases last year, and another employing from seventy to eighty men had eleven cases during two months' time, which, if kept up during the year, would mean sixty-six cases. The British statistics for 1910 show that in the district of Newcastle-on-Tyne 1,320 persons were employed in white lead works; five cases of lead-poisoning were reported for that year, or one in 264 men employed. One case was fatal. The figures for the same year in Illinois are between 425 and 450 men employed; sixty-three known cases of poisoning, or one for every seven men employed; three fatal[3] cases. These figures are, of course, open to criticism, for there were more men employed in the course of the year than the pay-rolls indicate, and there were persons with lead-poisoning who did not visit hospitals or dispensaries. One physician, for instance, gave us the names of three patients from one white lead factory and said that he had had more than twenty additional cases during the year. We, of course, entered on our list only the three cases.

LEAD-SMELTING

Bad as are the conditions in the white lead trade, it has at least the advantage of being admittedly a dangerous occupation, and in three of the four Illinois factories regular medical supervision of the employees has been introduced, the first step toward controlling industrial lead-poisoning. This is not as yet true of the lead-smelting industry, in which large numbers of men suffer from lead-poisoning and no apparent effort is made to protect them from it. According to physicians

2. These records are not always satisfactory. Meillere at the Brussels Congress of Industrial Hygiene, in 1910, said that to the average physician, as to the layman, lead-poisoning means colic or wrist-drop, an attitude of mind which he compared to that of a man who would say that alcoholism meant delirium tremens. The large number of cases of lumbago, rheumatism, nephritis and heart disease among lead workers, which we find in the records of some hospitals and dispensaries, lead one to suspect that Meillere may be right.

3. Our statistics of fatal cases are very incomplete. There is in the City of Chicago a curious ruling of the coroner's office by which every case of death by "poisoning" must be a coroner's case. Consequently, to save the family this needless annoyance, the physician makes out the death certificate for nephritis, arteriosclerosis, gastro-enteritis, etc.

practicing among these men, the great majority, if not all, become poisoned sooner or later, if they remain at work for more than a few months.

I had the opportunity last summer to visit a large lead-smelting works at Ems, a place under the charge of one of Germany's foremost engineers and subject to the regular inspection of an experienced physician. The contrast between that plant and the best of ours in Illinois was so great that I could easily understand the difference in the morbidity rate of this trade in the two countries. Germany has systematically set herself to control conditions in lead-smelting and the results are shown by a fall in morbidity from 73.7 per cent. of all employed in 1885 to 0.8 per cent. in 1892.

STORAGE BATTERIES

Another trade listed abroad as very dangerous is the making of storage batteries or electric accumulators, as they are called over there. This does not seem even to be recognized as a lead trade in this country, either by physicians or factory inspectors. To make storage battery plates, grids of metallic lead with deep grooves must be filled and covered smoothly with a paste made of oxid of lead. It is a dusty trade and, in the absence of all regulation, a very dangerous one.

We found some cases of very rapidly developing and severe lead-poisoning among workers in storage batteries, and an amount of sickness quite disproportioned to the number of men employed, for Illinois has no large storage battery works. Two small places, one employing eighteen men, the other fifteen, sent each two men to hospitals with acute lead-poisoning within a period of nine months, while the Hart Accumulator Works in London, employing more than a hundred men, did not have one case of poisoning last year. The actual contrast would of course be more striking than this, for there were undoubtedly other cases of lead-poisoning in the Illinois factories. Only a small proportion of workmen go to hospitals for treatment.

PRINTING

It is unnecessary to give further figures showing the contrasting results of neglect in America and scientific control in Europe. That point is certainly clear. There are, however, some interesting facts concerning the all-important subject of occupation which were brought out during this investigation. The printer's trade was found to be much more dangerous than should be the case in these days of linotypes. This is a trade which suffers greatly from lack of ordinary hygienic control; accumulations of lead dust, the practice of dry-sweeping, the use of unhooded melting kettles with no provision for the removal of fumes and an insufficient lavatory equipment—all these are avoidable evils, but they are the rule, not the exception.

The fifty-seven cases of lead-poisoning found among printers were probably all due to the neglect of ordinary precautions. We found, as Sternberg of Austria has noted, that lead-poisoning in printers tends to assume the slow, chronic form, and that, in addition to the fifty-seven typical cases, the death records of the Typographical Union show an unduly large mortality rate from nephritis, heart disease and apoplexy.

COMMERCIAL ILLUSTRATION

The mechanical or commercial artists are a class we had not suspected to be exposed to lead-poisoning. One does not see them mentioned in foreign statistics, and when I inquired about them of the Factory Inspection Department in London, I was told that no cases of lead-poisoning in artists were ever reported in Great Britain. The discovery of the fifteen cases on our lists came as the result of a conversation with a young artist who had been referred to me by his physician as an "unusual case of zinc-poisoning." The man's history was absolutely typical and analysis showed that the paint he supposed to be zinc-white was really white lead.

The artists seem to suffer more than any other one class from their physicians' lack of acquaintance with industrial processes. The patient assures his doctor that he is using no lead paints, for it is the policy of many engraving houses to withhold from their artists the fact that they are using a dangerous lead paint. Consequently all sorts of erroneous diagnoses are made.

The young man I interviewed had been urged by three physicians to have his appendix removed, and a friend of his, well known in the trade, actually had four abdominal operations before the development of a typical radial paralysis revealed the real nature of his trouble. These artists work chiefly with white paint, and we found that all but four of the seventy-four places visited use white lead. The paint brushes are very fine and in order to get just the right degree of moisture and a fine point, the artists put their brushes in their mouths. In addition they use an "air-brush," worked with compressed air, which sends a stream of finely divided white paint over the picture and which is also used to blow off the superfluous paint after it is dry. Owing to the fact that it is a highly skilled, well-paid trade, the men are loth to leave it, and among the fifteen cases there were some of very severe poisoning.

LEAD-POISONING IN WOMEN

There are very few women on our lists and the fact that the lead trades in Illinois do not employ many women is a great advantage, for women are notoriously more susceptible to lead-poisoning than men. Our eighteen women were employed in polishing type with emery, making car-seals, dusting lead colors on litho-transfers, labeling paint-cans in an atmosphere of white lead dust, working with aluminum foil, making artificial flowers, wrapping cigars in tinfoil; one was a commercial artist.

The lead trades of Illinois are not as important as those of some of the large Eastern manufacturing states. Illinois has no large pottery works using lead glazes, or lead glass works or storage battery works of any importance, or rubber works in which white lead is used. There are probably several states in the Union which would yield a much larger return than Illinois to such an inquiry as this. Among the industries classed as lead trades in other countries, but not found in Illinois, are the weighting of silk, lace and passementerie with lead, file-cutting, polishing jewels, making white straw hats, white gloves, using lead glazes for pottery, enameled signs, etc., and making rubber goods. Lead-poisoning is undoubtedly an important trade disease in every state in the Union, for even those states which have little manufacturing have large numbers of painters and printers.

The general subject of lead-poisoning is too well known to need discussion, but it may be of value to give briefly the results of very recent studies in diagnosis and experimental pathology, especially as some of them are to be found only in the reports of the International Congresses on Industrial Hygiene, which are not easily accessible.

XUM

DIAGNOSIS OF LEAD-POISONING

The most important point in the diagnosis is universally stated to be the history of the patient's occupation, and this of course assumes, on the part of the diagnostician, an acquaintance with the industrial processes which involve the use of lead. One point should be mentioned in this connection, and that is the latest theory as to the localization of lead paralysis. It used to be assumed that lead had a selective action on certain muscles or certain nerves—according as this paralysis was held to be myogenic or neurogenic—first, the extensor muscles of the fingers and wrist; second, the muscles of the shoulder; third, the extensors of the foot. But close study of the motions involved in those processes in which lead-poisoning occurs, has led to the belief that overwork is the determining factor (Edinger, Teleky). The group of muscles involved in the paralysis of painters and printers includes those of the forearm and hand. Storage battery workers suffer from paralysis of the muscles of the shoulder (Labbé). File-makers grasp the chisel with the left hand, and have paralysis of the left fingers and thumb (Bernhardt, Leichtentritt). Children, who use their legs more than their arms, have paralysis of the leg muscles (Escherich, Variot); laborers, the muscles of the shoulders and legs (Pieraccini).

It can easily be seen, then, that the diagnosis of lead-poisoning in a case of paralysis may depend largely, if not entirely, on the physician's knowledge of the details of his patient's industrial history. His anamnesis may otherwise be of little value, for Tanquerel des Planches found that fourteen of his 200 patients with lead paralysis had no history of colic.

Next to the history the most important place has been assigned now to one diagnostic sign, now to another. At the Milan Congress of Industrial Hygiene in 1906, basophilic granulation of the red corpuscles was agreed on as the earliest and most unfailing diagnostic sign, but at the congress held in Brussels last September a change in opinion was evident. Biondi insists that the granules are merely evidence of the formation of new cells and as this process is intermittent the cells may be present one hour and absent the next, depending on the activity of the hematopoietic tissues. Even if present they must not be regarded as significant unless they reach appreciable numbers, according to P. Schmidt. At least 100 out of 1,000,000 red cells must contain basophilic granules and a count of as many as 300 to 3,000 is usual in lead-poisoning. Oliver stated that he did not find basophilia in most of his cases, and thought the diagnostic value of this sign very dubious. Rambousek failed to produce basophilia experimentally in rabbits which were undoubtedly lead-poisoned. The general verdict of the Brussels congress was that basophilic granulation of the red cells is a good positive, but a bad negative sign.

The value of the procedure advised by Du Moulin, smearing the carefully washed skin with sodium sulphid to produce the black sulphid of lead, has been much criticized of late, especially by von Jaksch and Rambousek, and will probably never be generally used.

As for the search for lead in the urine, there is a wide divergence of opinion between authorities. Oliver finds it present in almost all cases, and regards the test as one of the greatest importance. He found lead in the urine of a woman who had symptoms suggestive of lead-poisoning nineteen years after she had given up work in lead, during which time she had not been in any ascertainable way exposed to lead. Oliver frequently finds lead in the urine of patients with old chronic cases, and Edsall makes the same statement. Agasse, Lafont and Heim also state that lead can always be found in the urine in cases of lead-poisoning. On the other hand, von Jaksch says that the search for lead in the urine in the later stages of chronic lead-poisoning is negative, although lead is present in acute poisoning and in the early stages of chronic. Rambousek and Pieraccini both advise testing the stools for lead instead of the urine. They find lead in the feces constantly, but they doubt whether the kidneys play much part in its elimination.

The lead line on the margin of the gums, so valuable a confirmatory sign when present, is absent in some otherwise well-marked cases.

It is therefore generally held that plumbism is too variable in its development for any one sign or symptom to be regarded as diagnostic. The following is the group of symptoms which, when present, point to lead-poisoning: pallor, due to vascular spasm and disproportioned to the degree of anemia, foul breath, caries of teeth, gingivitis, loss of appetite, increased by the disagreeable taste in the mouth, recurrent attacks of weakness which may render fine work impossible, spots before the eyes, itching around the eyes, gastro-intestinal disturbances, diarrhea or constipation, loss of flesh, showing especially in the cheeks. If these symptoms, each one slight in itself, are present in a lead-worker, T. Weyl would diagnose lead-poisoning in an early stage. When colic has come on, the general vascular spasm is shown in the great pallor, the absence of sweat, even with extreme pain and restlessness, the slow hard pulse, low temperature, retraction of the abdomen, strangury and unconquerable constipation. Dyspnea from spasm of the smooth muscles and sudden, severe myalgia, especially in the flexors of the legs may accompany the colic (Weyl). Oliver finds that the pain is often localized on one side and that the pupils may be unequally contracted, the one on the affected side being the smaller. In such cases pressure on the pneumogastric nerve in the neck on the affected side shows great tenderness in this nerve. Potain finds the liver contracted during the attack of colic, and returning to its normal size after the attack is over, another result of the vascular spasm.

ABSORPTION

The question of absorption of lead is of great practical importance. For many years it was a disputed point whether the skin or the intestinal tract was the chief channel of entrance for the lead salts, but now it is conceded that the intestinal mucosa, including that of the mouth, plays by far the most important part. The English have of late laid great stress on the inhalation of dust as a cause of lead-poisoning, and Goadby reported to the Brussels Congress the result of studies on animals showing that lead could be demonstrated in the lung capillaries of cats which had breathed red and white lead dust. German authorities concede the importance of dust but believe that the greater part of that which is breathed into the mouth is swallowed.

As for the skin, it is admitted by all that water-soluble salts of lead, such as the acetate, chlorid and nitrate, may be absorbed through the skin, but that this is slow and requires long exposure. The non-soluble or poorly soluble salts are thought by some to be changed by contact with the fatty acids in the sweat into soluble compounds. It is held by these observers that in summer while the skin is very active it may be an important channel of absorption. On the other hand, Leyman says

that skin absorption of non-water-soluble lead compounds has never been proved and he does not believe it of the least importance in industrial poisoning. To this Weyl, Toth, Legge, Oliver and Sommerfeld agree. Edsall thinks skin absorption relatively unimportant.

A large single dose of white or red lead is required to bring on symptoms of intoxication, but as lead is a cumulative poison, very small daily doses may be enough to give rise finally to the severest symptoms. Brouardel says that poisoning may follow the ingestion of no more than 1 mg. daily. It is of course only a question of disturbing the equilibrium between absorption and elimination, so that if the dose is suddenly increased or if there is a check to elimination, storing up of the lead begins.

PROPHYLAXIS

It would not seem logical to close without saying anything on the subject of prevention of lead-poisoning. As far as industrial poisoning goes, preventive measures have been worked out with great care by foreign governments and we have only to avail ourselves of the fruits of their experience.

The first requisite is the abolition of dust. Where this is impossible, and unfortunately American methods are much dustier than European, the workman must be protected by a respirator, although it should be remembered that no respirator is really an efficient shield against dust. Men obliged to work in lead dust should be given short hours, for fatigue is one of the strongest predisposing causes of lead-poisoning. Another necessary regulation concerns food. No man should be allowed to begin work fasting. Ample washing and bathing facilities and ample time to use them must be provided, and the men must be obliged to make use of them. If this is done, if dust is abolished and the men not allowed to eat lead[4] or carry it home on their persons, they can work in it with fairly little risk. I saw white lead workers in English and German factories very badly smeared with the lead while at work, yet the records showed no cases of poisoning.

Another necessary part of prevention, one most necessary in America, is the elimination of the casual shifting labor. We found in our study of the lead trades in Illinois that many newly arrived non-English-speaking Slavs, Italians and Greeks were engaged in the more dangerous processes of the lead industries and that they had little idea of the danger to which they were exposed, still less of how to guard against it. When such a man develops symptoms of acute plumbism he leaves his work and another ignorant immigrant takes his place, so that there is a constant procession of untrained men in and out of the lead trades. This condition is notoriously bad. In Germany statistics have shown that the amount of lead-poisoning in the white lead industry is in direct proportion to the number of casual laborers employed, and Oliver makes the same statement for England.

The regular medical inspection which is required by law in most foreign countries makes it possible to detect and remove susceptible workers and to abort a threatened attack of colic. There are factories in Illinois in which this feature has been voluntarily introduced by the employers and the bill now pending before the legislature will make it compulsory.

Legislation to regulate the poisonous trades is much needed in every state, but the first logical step toward it is a study of the conditions in that state, a task which naturally belongs to us physicians.

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4. In many Illinois factories it is customary for foremen to encourage the men to chew tobacco, under the impression that the expectoration clears the mouth of lead dust. In Europe and England tobacco chewing in lead works is forbidden by law, for the sanitarians hold that lead is carried into the mouth by a plug of tobacco which has been lying in lead-smeared clothes and is handled with lead-smeared fingers.

THE VALUE OF ANIMAL EXPERIMENTATION AS ILLUSTRATED BY RECENT ADVANCES IN THE STUDY OF SYPHILIS *

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BALTIMORE

I. INTRODUCTION

No one who is alive to the nature of physical pain or aware of the charm of the domestic animals could fail to sympathize with an inquiry into the warrant for animal experiments. It has always seemed odd, it is true, that this critical demand should not only begin with, but often single out for its entire attention, the one human activity involving animal sacrifice which has for its aim the relief of human distress; and that the good souls who become so concerned over one etherized dog, can regard with indifference the packing industry—with its wholesale slaughter to appease appetite; or the fur industry—with its reckless massacres to satisfy vanity; or the fisheries—consigning myriads of helpless beings to slow death by drowning in the air.

Nevertheless, those who are responsible for deliberate experiments on animals recognize the request for its grounds of justification, as a perfectly reasonable one. If the discussion is one in which facts may be offered as evidence, it ought to be a simple matter to determine whether or not the achievements of the experimental method justify its continuance. The history of the subject is an open book; and in commending it to the honest inquirer, medicine need speak in no apologetic tone. Abundant facts for a final decision of the question would come to light through a study of bacteriology and surgical asepsis—a whole science based on experimentation; or of the acute diseases for which specific cures have been determined (malaria, diphtheria, cerebrospinal meningitis); or of the plagues which may be absolutely prevented by hygienic and therapeutic measures (malaria, diphtheria, yellow fever, small-pox, rabies, tetanus); or of the hospital plagues which aseptic technic has almost abolished (erysipelas, blood-poisoning, hospital gangrene); or of the developments which have made every portion of the body accessible to surgery; or of the triumphs of obstetrics, which have reduced the appalling dangers of childbed fever to an almost negligible minimum. Even then only the most striking conquests of medicine would have been considered; and their significance would not have been even approximately grasped by those unfamiliar with the difficulties encountered by medicine at every step forward.

Nowhere, however, can the value of animal experimentation be so satisfactorily tested as in a study of the history of syphilis.

II. THE SOCIAL IMPORTANCE OF SYPHILIS

A just estimate of the value of animal experimentation in the development of the knowledge of syphilis is of vital interest because of the importance of the disease

* Editor's Note: This is Pamphlet 20 in the Defense of Research series. A list will be sent on request.

in the community. This is an importance usually overlooked by the public, whose interest is attracted by the more deadly plagues. Yet it is well within the limits of conservatism to say—so wide-spread is the disease, so calamitous and far-reaching are its effects—that none surpasses it, and few equal it in hygienic importance. The attitude of the public toward experimentation undertaken to extend our knowledge of this disease is then, obviously, by no means a matter of indifference.

Wide-spread as the disease undoubtedly is, we have no means of determining its exact extent with accuracy; so many cases go unreported, and so many of the late effects of the disease unrecognized, that all our estimates are underestimates. Yet even so, the figures are sufficiently striking. LeNoir, after a study of nine years, reported at the International Congress in Brussels that between 13 per cent. and 15 per cent. of the male adults of Paris were syphilitic; in other words, that in this city alone, and considering only the male sex, there were 125,000 cases of the disease. These figures were confirmed by Fournier;[1] yet they by no means give even an approximate idea of the extent of the disease, for they take no adequate account of the ravages of late hereditary and parasyphilitic processes.

Syphilis in its acute stages is not a frequent cause of death; and examination of mortality statistics would, therefore, hardly be expected to demonstrate the extent of its ravages — as it might be expected to do, for instance, in the case of typhoid fever. Yet some idea of its spread and significance may be obtained by a consideration of the attitude of insurance toward it. Runeberg[2] found that, including certain apoplexies, probably syphilitic in origin, the mortality from the disease was about 15 per cent. — the total being second only to that of tuberculosis which caused 21 per cent. of the deaths. These figures, which may be somewhat higher than other statistics would justify, assume added importance when it is remembered that they represent the facts existing among the insured, that is to say, the most vigorous portion of the population. The damage done by the disease consists largely in its lowering the standard of average health, paving the way for other diseases and possibly laying the foundation for mental degeneration and alienation. The extent of these secondary effects can only be estimated. Most insurance companies require that four or five years shall have elapsed after the disappearance of the last symptoms of the disease; and no applicant who has had syphilis is given a policy which will keep him on the company's books after his fifty-fifth year. Greene[3] goes even further, and firmly believes insurance at ordinary rates (even after an interval of five years) to be an error. Under no circumstances would he advise a straight life policy to be issued to a man who has a syphilitic history.

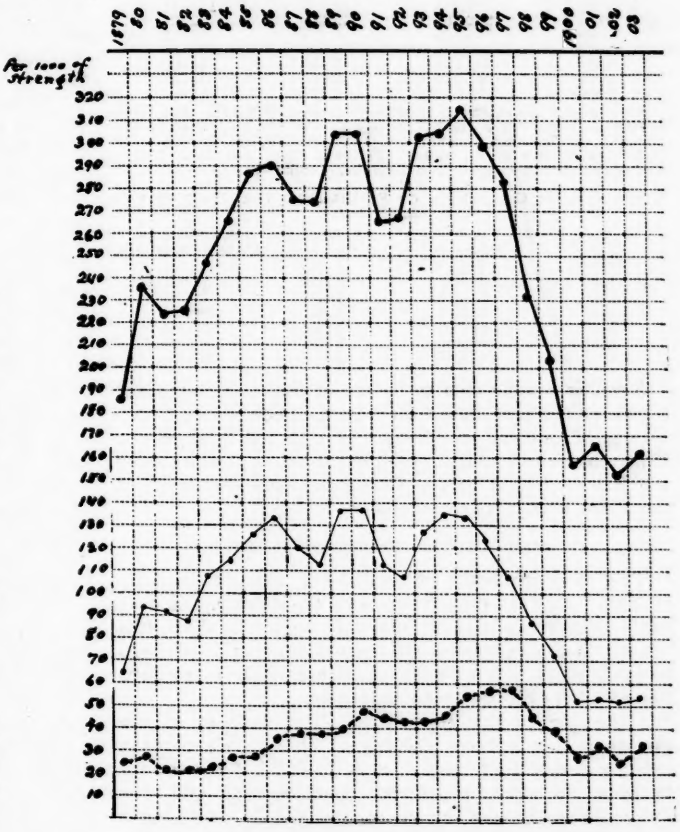
III. SYPHILIS IN THE ARMY

Consider the state of affairs in national organizations in which men are under constant discipline and something like accurate statistics may be obtained. Table 1 represents the admission-rate per 1,000 of strength for syphilis among the British troops in India.

TABLE 1.—SYPHILIS AMONG BRITISH TROOPS IN INDIA PER 1,000 OF ADMISSIONS

Year.	Primary Syphilis, Inc. Soft Chancre.*	Secondary Syphilis.
1887	142.1	29.4
1888	142.1	32.4
1889	225.1	51.2
1890	220.7	66.3
1893	213.6	61.6
1894	248.1	74.6
1895	239.0	84.9
1896	226.4	97.7
1897	201.7	101.9

*It must be observed that the figures in this column include certain non-syphilitic venereal lesions. The above table is from French: Syphilis in the Army.



Chart, taken from French: Syphilis in the Army, Chart III, Appendix III. The upper, heavy line represents the incidence of all venereal disease; the middle, fine line represents the incidence of primary venereal sores; the lower, dotted line represents the incidence of secondary syphilis.

It is the study of such figures as these which leads experts like Sir Alfred Keogh[4] to write:

> It may be stated without fear of contradiction, that there is no disease, with the possible exception of malaria, that has so important an influence on the efficiency of an army or navy as syphilis. Other diseases doubtless are more deadly and consequently attract more attention; no other is so lasting in its effects, or so persistent in its attack on the bodily strength of the man who has once acquired it. A soldier gets enteric fever and either dies or recovers. Out of a hundred such, it may safely be prophesied that eighty will survive, and of these seventy, at least, be not only none the worse for their experience, but eventually all the more efficient for field ser-

1. Fournier: Treatment and Prophylaxis of Syphilis, Marshall's translation, edition 1906, Part II, p. 157.
2. Osler and Churchman: Chapter on Syphilis, Osler's Modern Medicine, iii, 495.
3. Greene: Examination for Life-Insurance, p. 118.
4. Keogh: Introduction to D'Arcy Power and Murphy's System of Syphilis, vol. vi.

vice in consequence of it. . . On the other hand, thirty men get syphilis, and not one of these can ever be considered the man he was before.

With this expert opinion in mind, a glance at the accompanying chart will convince any one of the tremendously crippling power of syphilis in an army. It represents the facts for the British army at home and abroad.

These statistics may be supplemented by two further tables, showing the incidence of syphilis in the armies of Great Britain and the United States.

TABLE 2.—THE INCIDENCE OF SYPHILIS IN THE BRITISH ARMY AT HOME AND ABROAD *

Year.	Strength.	Admissions for Syphilis.	Admissions Per 1,000 of Strength.
1894	203,469	27,436	145.01
1895	200,681	28,081	140.41
1903	282,182	12,668	52.31
1904	244,425	9,219	37.72
1905	240,075	7,039	29.32
1906	230,128	5,958	25.89
1907	217,844	5,033	23.11
1908	215,647	4,137	19.19

*The slight discrepancies between figures in this table and those in the previous chart are apparently due to the fact that in the chart a certain small number of non-luetic lesions are included under "primary venereal sores." Tables 2 and 3 are from D'Arcy Power and Murphy: System of Syphilis, Volume VI.

TABLE 3.—THE OCCURRENCE OF SYPHILIS IN THE ARMY OF THE UNITED STATES

Year.	Strength.	Admissions for Syphilis.	Admissions Per 1,000 of Strength.
1903	71,679	1,676	23.36
1904	59,671	1,525	25.56
1905	55,619	1,953	35.11
1906	53,573	1,869	34.89
1907	53,249	1,534	28.80
1908	50,705	1,436	28.32
1909	62,263	1,592	25.57

Syphilis is thus seen to be one of the most important causes of military inefficiency, even under the best conditions of medical supervision. Given the least leeway it may break out to an appalling extent, as it did among the British troops in the Peninsula, who christened it the "Black Lion of Portugal."[5]

IV. THE SERIOUS NATURE OF SYPHILIS

The wide incidence of syphilis is, then, sufficiently evident. But the great menace of the disease, not only to the two arms of the national defence, but to the health —even to the existence—of the nation as a whole, can be made plain only by a consideration of the calamitous nature of its clinical manifestations.

1. *Danger to the Individual.*—The dangers of the disease to the afflicted individual himself are perhaps roughly appreciated, though it is doubtful if the serious handicap to work, which the compromising and disagreeable secondary symptoms cause, is sufficiently understood. What is certain is that the laity and a majority of physicians wholly fail to appreciate the grave and often fatal nature of the tertiary manifestations. These are particularly pathetic, because they may appear in the prime of life, years after the initial lesion has been forgotten as a thing of the past; and may absolutely incapacitate an otherwise healthy man, who has become involved in the responsibilities of a husband and father. Nothing is more distressing than the sinister predilection of tertiary syphilis for the nervous system. Of 5,749 syphilitic patients studied by Fournier,[6] 758 developed syphilis of the brain, and 1,099 others syphilis of the cord and nerves. That is to say, nearly one out of every three of the patients exhibited syphilis of the nervous system. And if to the multiform manifestations of the disease in its active stage be added the parasyphilitic phenomena — serious, incapacitating and as yet not amenable to treatment — some faint idea may be gained of the far-reaching effect of the disease on the individual.

2. *Danger to the Family.*—But it is as a menace to the family that this disease appears most formidable. No catastrophe can be more disastrous than its spread by the marital relation; no spectacle more dreadful than its transmission to innocent children.

It is the wife, of course, who is most often—though not *always*—innocently infected; and when this occurs, disasters of many kinds follow. The woman herself is submitted to the discomfort, the risk and the degradation of syphilis; and no consequence of the disease can be more distressing. Nor is this occurrence a rare one. Those who regard syphilis as the peculiar property of the underworld, and eye its victims with suspicion, would be surprised at the facts brought out by Fournier[6] who, in a study of 100 syphilitic women, found one in every five to have been innocently infected by her lawful husband. Such a woman must suffer not only in her own body; she must expose her children to the most serious form of syphilitic heredity—mixed heredity. It is only natural that such a train of affairs once started often ends in the dissolution of the family. Even if actual divorce does not ensue, the family ties fail to stand the test; affection and respect die; and we have the melancholy spectacle of a house divided against itself. Moreover, not infrequently, economic ruin ensues through incapacitation of the head of the family and the household becomes a public burden.

3. *Danger to Posterity.*—But this foul disease appears most foul in its dastardly attacks on the second and third generations; and all other features fade beside its importance in heredity. Indeed, the need of protecting innocent children from syphilitic infection is the complete answer to those who object to the removal of the consequences of syphilis as inciting to vice.

An infant mortality astonishingly high is what the disease produces. In many instances this amounts to a complete annihilation of posterity. Ninety women studied by Fournier—all seen in private practice, all of good constitution and surrounded by a favorable environment of hygiene and wealth—became pregnant during the first year of the disease ("the year of terror"). Fifty of these women aborted, thirty-eight infants died soon after birth, and only two children survived—a mortality of 97.7 per cent.! Another study included 200 men who had married while syphilitic, but who failed to contaminate their wives. Four hundred and three pregnancies for which these men were responsible resulted in 288 living children and 115 still-births, abortions and early deaths. Instances of excessive infantile mortality could be indefinitely multiplied. Ribemont-Dessaignes, for instance, reports a woman who contracted syphilis from her husband; she became pregnant nineteen times, had five still-births and gave birth to fourteen children, every one of whom died under 6 months of age. "A child," writes Fournier, "conceived by a woman in the course of recent syphilis is almost certainly condemned to death."

But to this dreadful indictment must be added the woful heritage which syphilitic parents bequeath to the children who do manage to survive. Fragile infants—a prey to every infection; monsters; pathetic and wizened mannikins; idiots; normal children, condemned to a late

5. Ricord: Illustrations of Syphilis. Historical introduction in Belton's Translation.

6. Practically all that is here written on the dangers of syphilis is taken from Fournier's Treatment and Prophylaxis of Syphilis, Marshall's Translation, ed. 1906, a book that should be familiar to everyone interested in the disease and its relation to society.

XUM

syphilitic heredity at the second dentition or at puberty —this is the spawn of syphilis. Nor does the trail of the beast stop here; the heritage which these unfortunates receive they pass on to their descendants; and the effects of the disease in heredity may be traced through three generations (Gilbert, Caubert, Étienne). "To cleanse the brothel," writes Fournier, "is not only to protect those who frequent it; it is also to protect the family hearth, the honest woman, the child and the race."

That syphilis is a formidable national scourge and that complete knowledge of it is of fundamental hygienic importance may, then, be regarded as established.

V. KNOWLEDGE OF SYPHILIS GAINED BY THE EMPIRICAL METHOD

We have next to inquire into the state of medical knowledge of the disease before animal experimentation began. This will be particularly instructive; because by comparing the knowledge thus slowly acquired, through long years of simple observation, with the rapid advances made in the few years in which the study of the disease by the experimental method has been possible, we get a vivid picture of what productive animal experimentation, now adding daily to our knowledge of syphilis, really means.

It may be said at once that the information about syphilis which medicine was able to accumulate, entirely without the aid of animal experiment, was marvelously complete and accurate. Here is a disease, protean in its manifestations, affecting probably every organ in the body, pursuing a long and insidious course, almost identical in its initial forms with other simple venereal infections and possessing a peculiar power of mimicry, whereby it can simulate minutely the signs and symptoms of numerous other diseases. The conditions could hardly present greater difficulties. Yet, purely by the method of clinical observation, chaos was gradually reduced to order. It is true that this result was many long years achieving. At the time of the European syphilitic pandemic (1494) enormous confusion prevailed as to the nature of the various venereal infections. The difficult problem was gradually solved—but how gradually, may be realized when it is recalled that not until nearly 400 years had elapsed was the question of the dualistic nature of syphilitic and non-syphilitic venereal infections settled.

Quite as interesting as the completeness of the clinician's acquaintance with syphilis in pre-experimental days, was the satisfactory condition of its therapeutics. Working by purely empirical methods and entirely without a rational or an experimental basis, the early physicians found and developed a method of treatment by which the disease could almost always be controlled, and, in a large majority of cases, absolutely cured. The choice of mercury—recommended in syphilis by the Galenists for the most absurd of reasons—happened to be a lucky guess.

In 1836 the administration of potassium iodid in syphilis was recommended by Wallace. This date is an important one in the history of the disease: for it does more than mark the year of a valuable contribution to therapeutics. It marks, too, the end of important advance in our knowledge of the disease; for from that year until the recent successful experimental work on animals, medicine stood practically still so far as syphilis was concerned. A few advances were, of course, made; the debate as to the dual nature of luetic and non-luetic lesions was brought to a conclusion by the French school (Bassereau, Fournier, Clerc, Ricord); certain unrecognized syphilitic lesions were described (arthropathies by Richet, bursopathies by Verneuil); extensive statistical studies were made by Fournier and others; and the importance of parasyphilitic and late hereditary forms was recognized and emphasized. But no really new light was thrown on the disease. Clinical study had about reached the limit of its possibilities.

VI. DEFICIENCIES IN PRE-EXPERIMENTAL KNOWLEDGE OF SYPHILIS

It is essential for one interested in good faith in determining the value of experiments on animals in syphilis to ask whether there was any need that this intimate, and in many respects, satisfactory clinical and therapeutic knowledge be supplemented by facts which animal experimentation might supply. Was it merely that scientific curiosity craved satisfaction? Or were there real hygienic needs to be met, and to be met only by the study of the disease in animals?

That a vital demand for further knowledge existed becomes at once apparent when it is stated that, complete as our knowledge of syphilis was, there were a number of points at which it was replaced by ignorance as complete; and that this ignorance concerned certain fundamental features of the disease.

In the first place, it has often been impossible to make an early diagnosis. The first sign of syphilis (the chancre) usually appears about three weeks after infection has occurred. When it *does* appear its nature is often so uncertain that further phenomena must be awaited before the prolonged and disagreeable treatment can be instituted. If specific treatment is undertaken immediately, the sore will disappear, secondary symptoms may never present themselves, a positive diagnosis may never be made and the treatment—which, to be effective, must be carried on thoroughly over a period of years—will at first be half-heartedly undertaken and in a short time discontinued. On the other hand, if treatment is not promptly begun, valuable days, even weeks, pass before the disease can be positively recognized and attacked.

In the next place, positive diagnosis in the later stages of the disease is often impossible. Those unfamiliar with the protean manifestations of syphilis have no conception of the difficulty it may present in diagnosis. Even the most experienced physicians are often unable to tell whether a given condition is syphilitic or not.

But a graver deficiency in our knowledge of this disease, is our inability to recognize it in its "latent" forms. In these cases the infection, though still present and likely to break out at any time or to be passed on to others, is not at the moment producing any obvious signs or symptoms. It is this form of the disease which contributes largely to the danger of syphilis among prostitutes; for the existence of latent syphilis, though a real menace to the community, may escape the most careful medical inspection. A syphilitic woman could quite well be the source of widespread infection and yet possess a clean bill of health on the absence of obvious signs.

Moreover, we have never known how long it was necessary to continue treatment before a complete cure was obtained. As our knowledge of the disease advanced, it became clear that a longer and longer duration of treatment was necessary for safety; and it is now rather arbitrarily estimated at about three years. But this is only an estimate. And how unsafe it is to proceed, in this matter, on an estimate becomes apparent when the importance of the disease to marriage is borne in mind.

All physicians are agreed that no syphilitic should marry until the disease has been positively cured; but they have no way of telling just when cure has been effected; and have, therefore, always lacked the necessary data for intelligent advice to their patients.

Finally, so long as the cause of the disease was unknown and the possibility of its study by the methods of reproduction in animals excluded, advances in the knowledge of the disease—such as these methods had made possible in the case, for example, of suppuration—were quite out of the question.

VII. WHAT EXPERIMENTAL RESEARCH HAS ACHIEVED IN THE CASE OF SYPHILIS

1. *Successful Reproduction in Animals.*—Previous to 1903 animal experimentation practically did not exist so far as syphilis is concerned. So many of the attempts to transmit the disease to animals had been unsuccessful, and so difficult was it to control the supposedly successful results, that the general attitude toward the subject was one of apathy. Certain observers had indeed reported successful transmission to animals. Auzias-Turenne,[7] for example, claimed to have inoculated the cat; LeGros and Lancereaux,[8] the pig; and an occasional success had been obtained in monkeys (Klebs,[9] Martineau and Hamonic,[10] Nicolle[11] and others). But the successes had been only occasional and could not be substantiated by independent observers.

In 1903, however, the first communication of Metchnikoff and Roux[12] was published by the Pasteur Institute. The authors reported the undoubtedly successful transmission of syphilis to a two-year-old female chimpanzee; and the equally successful inoculation of a male chimpanzee with material taken from the first animal. Several bonnet monkeys (*M. sinicus*) were also successfully inoculated; but certain species (e. g., the mandrils) seemed to be insusceptible. These experiments were promptly repeated by Lassar[13] and the results confirmed.

The successful inoculation of animals immediately opened up a dozen avenues of research, and a second communication soon appeared from the same workers.[14] Here, continuation of the inoculation experiments was reported; and it was apparently demonstrated that monkeys might be divided into two groups, according to their susceptibility to syphilis — the anthropoids approaching the lower races of man in susceptibility, the mandrils and maimons exhibiting a complete natural immunity to the disease. The idea was therefore confirmed, which had previously been advanced by others, that failure to use susceptible animals probably explained much of the inconsistency of the experimental work done before this time. Additional confirmation of this work soon came from Neisser,[15] who reported successful inoculations of chimpanzees, orang-outangs and a gibbon. In 1904, Metchnikoff and Roux's third communication[16] appeared. Here the particularly interesting point was made that the syphilitic virus would not pass through a Berkefeld filter. Klingmüller and Baermann[17] had previously made the same assertion *after having inoculated themselves with human syphilitic material* which had been passed through a Berkefeld filter. Finally, the two workers at the Pasteur Institute published their conviction, in a fourth communication,[18] that the chimpanzee, by reason of its susceptibility to syphilis and the similarity of the symptoms produced with those seen in human beings, was the most suitable animal for experimental purposes. More important still, they were able to confirm the work of Schaudinn, which had meanwhile appeared, by finding the *Spirochæta pallida*[19] in 74 per cent. of thirty-one syphilitic monkeys. Thus did the two lines of research promptly cross.

Experimental work on animals other than monkeys was never very conclusive until Bertarelli[20] reported the successful inoculation of the cornea in rabbits. A simular result had been obtained by Haensell;[21] and Bertarelli's observations were promptly confirmed by Hoffmann and Brüning,[22] by Scherber,[23] and by Greef and Clausen.[24]

Thus, in a few short years the technic of animal experimentation—so fruitful in other fields—has been developed for syphilis. It is impossible to exaggerate the importance of this advance, which touches the whole dreary prospect of syphilis with hope. The work of Metchnikoff and Roux on susceptibility and immunity, of Finger and Landsteiner[25] on the infectiousness of tertiary lesions and of semen, of Neisser on the syphilitic testicle: these are a few instances of the way in which new avenues of progress were immediately opened up and promptly traveled by eager scientists. The prevention of syphilis, which previously seemed an utopian dream, became—once the transmission of the disease to animals was assured—a reasonable, if remote, hope; and there was not a single dark crevice into which this discovery did not throw encouraging light.

2. *Discovery of the Cause of Syphilis.*—The year 1905 marks the beginning of a new era in the history of syphilis; for a publication which then appeared put an end to the long and weary search for the cause of the disease. The idea of a living contagium in syphilis had long been held, and the tale of the search for it is one to make the judicious grieve. But a new light broke with the appearance of the paper of Schaudinn and Hoffmann.[26] It was an epoch-making report, but it was a model of calmness. Despite the importance of the observations, the facts were cautiously stated and a discussion of their significance postponed until the accumulation of further data. The authors had found, they said, a characteristic, nonrefractile, delicate organism, from 4 to 14 microns in length, pointed at both ends, with numerous clear, tight, cork-screw-like spiral curves. It was readily distinguishable from other bacterial and protozoan forms, and had been found in numerous primary and secondary syphilitic lesions. Moreover, Metchnikoff had been able to demonstrate its presence in the primary lesion of an experimentally inoculated ape.

7. Auzias-Turenne: La syphilisation, 1878, p. 422.
8. Legros and Lancereaux: In Dictionnaire Encyclopédique des Sciences Médicales, 1884, xiv, 498.
9. Klebs: Arch. f. exper. Path, 1879, x, 161.
10. Martineau and Hamonic: Bull. de l'Acad. de med., 1882, 1007; Soc. med. des hôp., 1883; Rev. Clin. d' androl. et de gynecol., 1903, p. 225.
11. Nicolle: Not published; quoted by Metchnikoff and Roux in their first communication.
12. Metchnikoff and Roux: Ann. de l'Inst. Pasteur, 1903, xvii, No. 12.
13. Lassar: Berl. klin. Wchnschr., 1903, No. 52, p. 1; 1904, p. 801.
14. Metchnikoff and Roux. Ann. de l'Inst. Pasteur, 1904, xviii, No. 1.
15. Neisser: Deutsch. med. Wchnschr., 1904, pp. 1369, 1431.
16. Metchnikoff and Roux: Ann. de l'Inst. Pasteur, 1904, xviii, 657.
17. Klingmüller and Baermann: Deutsch. med. Wchnschr., 1904, p. 766.
18. Metchnikoff and Roux: Ann. de l'Inst. Pasteur, 1905, xix, 673.
19. There is some disagreement as to the proper name for this organism; *Treponema pallidum* is probably more correct, but *Spirochæta* is used here as being more familiar.
20. Bertarelli: Centralbl. f. Bakt., Orig. 1, 1906, xli, 320.
21. Haensell: Arch. f. Ophth., 1881-3, xxvii, 93.
22. Hoffmann and Brüning: Deutsch. med. Wchnschr., 1907, No. 14, p. 553.
23. Scherber: Wien. med. Wchnschr., 1906, p. 726.
24. Greef and Clausen: Deutsch. med. Wchnschr., 1906, p. 1454.
25. Finger and Landsteiner: Arch. f. Dermatol. u. Syph., 1906, lxxviii, 385; lxxxi, 146.
26. Schaudinn and Hoffmann: Arb. a. d. k. Gsndhtsamte, xxii, No. 2, p. 527; Deutsche. med. Wchnschr., 1905, No. 18, p. 711.

This paper immediately awakened a new interest in the subject throughout the world; and confirmatory evidence soon accumulated in enormous amounts.[27] Before long, what had at first been cautiously accepted as a probability bordering on certainty, became a certainty; the *Spirochæta pallida* of Schaudinn and Hoffmann withstood all efforts to disprove its etiologic relation to syphilis; and the long and weary search for the cause of the disease was at an end.

3. *Discovery of a Diagnostic Reaction Specific for Syphilis.*—Hardly less important than the discovery of the cause of syphilis, was the demonstration of a biologic reaction, the presence of which is absolute proof of the existence of the disease, even in the absence of signs or symptoms.[28] The very great value of such a reaction in cases of doubtful diagnosis, and particularly in latent syphilis, needs only to be mentioned to be appreciated. The reaction was discovered almost simultaneously by Wassermann, Neisser and Bruck,[29] and by Detre,[30] working independently, but with practically the same technic. The names of Bordet and Gengou[31] must, however, be borne in mind in this connection. These two pioneer observers (who also recognized the *Spirochæta pallida* before Schaudinn and just missed appreciating its significance) were the first to describe the general phenomenon of complement fixation (or deviation), of which the Wassermann reaction for syphilis is a modified example. *This highly theoretical investigation and the immensely practical application of it by Wassermann depended on animal experimentation at every step.*

The Wassermann reaction depends on the capacity which the serum of syphilitic patients has to fix complement in the presence of extracts of syphilitic tissue, or certain other alcoholic extracts. This fixation of complement is tested for by the use of a so-called hemolytic system, which consists of red blood-cells, and a serum capable, in the presence of complement, of hemolyzing them. It is impossible to define the reaction without the use of highly technical terms which would themselves require extensive definition. Here, one may simply state how the test is made. Extract of known syphilitic material and the blood-serum of the patient to be tested are mixed in a test-tube. Fresh guinea-pig serum is then added and the mixture incubated to allow complement-fixation to occur. The hemolytic system, which requires complement for the completion of the hemolysis, is next added. If the serum to be tested is not syphilitic, complement is not bound and hence is available for the use of the hemolytic system; hemolysis, therefore, proceeds, the red blood-corpuscles continue to be destroyed, the mixture becomes red in color and the test is negative. If, on the other hand, the serum is syphilitic, complement is bound, hemolysis inhibited, the red blood-cells not destroyed, the mixture not reddened, and the test is positive.

This test, while not absolutely constant, has turned out to be one of the most valuable of the biologic reactions. When the test is negative, syphilis is not excluded; but when positive, a diagnosis of syphilis is to be made with almost absolute certainty. It has already shown itself even more reliable than the Widal reaction; and no one familiar with typhoid fever is ignorant of the very great value of this diagnostic test.

4. *Discovery of a Specific Drug for Syphilis.*—It would be difficult to find in the history of medicine a more interesting and instructive story than the account of the work which led up to the discovery of salvarsan (606). When Ehrlich began his work years ago, syphilis was the last thing in his mind. He was interested at that time in the idea which possessed him that every living cell has a chemical affinity for some particular substance. This property of mutual attraction he called chemotropism; and in experimenting with dyestuffs he came upon a very pretty example of it in the selective affinity which methylene-blue exhibits for cells of the nervous system. If, then, such a specific affinity did exist, it seemed quite probable that it might also exist between certain drugs and certain parasites; and after some years of further experimentation Ehrlich was able to investigate this point. He believed that for each specific parasite, a specific curative drug could and would be found.[32] Because of the sleeping-sickness epidemic in Africa and because the disease is easily transferable to mice, Ehrlich began with a study of this affection. He succeeded, in connection with Weinberg, in producing a new dyestuff (trypan-red) which caused the organisms to disappear from experimentally inoculated mice in one injection. It was soon shown that parasites rapidly acquired a tolerance for such drugs and that, in order permanently to cure a parasitic disease, it was necessary to destroy every single parasite in the shortest possible time. Ehrlich's very difficult problem then became to produce a substance which was so specific for given parasites as completely to destroy them at one injection, but which was at the same time harmless to the infected animal itself. Starting, then, from atoxyl—an arsenic compound known to be efficacious in trypanosomiasis, but dangerous to the animal—Ehrlich proceeded to the solution of the problem. The task was one of colossal dimensions. Hundreds of substances had to be synthetized and then tested for toxicity on various species of animals. Of the large number of drugs made and tried, only about ten stood the test.

At about this stage in the work it was shown by Bertarelli and others, that syphilis could be transferred to rabbits; and Ehrlich turned his attention to the diseases caused by the spirilla and spironema: syphilis, relapsing fever and chicken spirillosis. In a short time a drug was produced—No. 606 in the series—which Hata found would definitely cure chicken spirillosis in a small, safe, dose, would completely sterilize a mouse infected with relapsing fever, and—in a dose one seventh of the *dosis tolerata*—was sufficient to cause the *Spirochæta pallida* to disappear from a syphilized rabbit.[33] Ehrlich repeated the experiments; the drug was again tested on dogs, *and on two of Professor Alt's assistants, who volunteered to demonstrate in this way the safety of the drug for*

27. It is impossible to indicate even the more important articles. The early literature on the *Spirochæta pallida* is collected in a Leipsic thesis by Julius Glass, December, 1905; and by Herxheimer, in Lubarsch and Ostertag's Ergebnisse der Alleg. Path., Jahrgang, xi, Abteil. 1. The article by F. P. Gay in Internat. Clin., 1907, iii, series 17, p. 199, is accompanied by a useful bibliography.

28. The reaction has been observed also in leprosy and in scarlet fever; but for practical purposes these exceptions do not impair its diagnostic value.

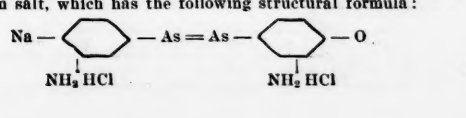
29. Wassermann, Neisser and Bruck: Deutsch. med. Wchnschr., 1906, xxxii, 745; Wassermann, Neisser, Bruck and Shucht: Ztschr. f. Hyg. u. Infektionskr., 1906, lv, 451; Wassermann: Wien. klin. Wchnschr., 1906, xxi, 745; Wassermann and Meier: Deutsch. med. Wchnschr., 1907, xxxiii, 1287.

30. Detre: Wien. klin. Wchnschr., 1906, xix, 619; Detre and Brezovski: Wien. klin. Wchnschr., 1908, xxi, 1700.

31. Bordet and Gengou: Ann. de l'Inst. Pasteur, 1901, xv, 289; Bordet: Bull. de l'Acad. royale de Belgique, 1906, xx, 454; Ztschr. f. Immunitäts-Forsch., 1909, Referate I, 1. Bordet and Gay: Ann. de l'Inst. Pasteur, 1906, xx, 467.

32. Marks, L. H.: Ehrlich's Biochemical Theory, Its Conception and Application, THE JOURNAL A. M. A., Dec 3, 1910, p. 1974.

33. The chemical name of this preparation is p.p.—dioxy=m.m.—diamido-arseno-benzol. It is used in the form of hydrochlorid of the sodium salt, which has the following structural formula:



human beings. It was then tried on patients. In order to make the test of the drug on human beings as convincing as possible, Ehrlich distributed 20,000 doses to clinicians of standing throughout the world, on the condition that certain rigid restrictions in administration be observed, and that the patients be kept in hospitals several days for observation. On the results thus obtained, Ehrlich will base his conclusions as to the value of the drug in the treatment of human syphilis. Those who have attempted to assemble, one at a time, 20,000 objects of any kind—say something as readily accessible as a canceled two-cent stamp—will appreciate something of the magnitude of this task, when they remember that the preparation of the dose of the drug, the necessary examination and subsequent observation of the patient, the preparation of the records, the critical examination of the results—are proceedings which represent hours of work for each individual case; and that this colossal task is merely the final stage in a research which has been going on for years. This point is worth calling to the attention of those who are accustomed to regard animal experimentation as child's play, undertaken at odd moments, by brutes who love to see animals squirm.

This account of the work of Ehrlich is the briefest possible sketch.[34] It conveys no idea whatever of the difficulty of the problems attacked, or of the genius displayed in overcoming them. It says nothing of several important contributions made to the theory of science, and to the practice of medicine, by the way. One of the earliest points brought out, for example, was a demonstration of the true chemical nature of atoxyl. Again, trypan-red—though used by Ehrlich against sleeping-sickness—was shown by Nuttall to be also effective in the widely distributed Texas fever of cattle. Salvarsan (606), sent by Ehrlich to Iversen in Russia, proved to be of very great value in the treatment of relapsing fever.

Of the exact value of the drug in syphilis it is too early to speak; the evidence is not yet all collected and has not been made public. Moreover, it is recognized as quite possible that a drug so powerful may have important deleterious effects; and until this point is cleared up by experience, any judgment as to its final place in medicine is ill-advised. It is, however, an open secret that astonishing results have been obtained. From the clinics of Wechselmann and many others, reports have already appeared which make it seem certain that—even if the final results fail to fulfil the early hopes—a contribution of the very first importance has been made to the therapeutics of syphilis.

But Ehrlich's work has been more than a contribution of this sort. He has founded a new science of chemotherapy, and has given a new vitality to pharmacology—hitherto interested largely in the toxic effects of drugs on normal animals. He prophesies a new era to be brought about by the interest of chemists like Baumann and Emil Fischer, and clinicians like von Mehring in practical therapeutics. "On the basis of years of experience in the laboratory," he writes, "I indeed believe I am justified in expressing the hope that, by carefully following the path [of chemotherapy] which I have sketched, a sure advance will be made."[35] These are the cautious and serious words of a serious man, whose talent and achievement place him in the very first rank. It is the opinions of such men which should be decisive in these matters.

34. Marks, L. H.: Paul Ehrlich; the Man and His Work, McClure's Magazine, December, 1910; Schweitzer: Ehrlich's Chemotherapy—a New Science, Science, Dec. 9, 1910.
35. Ehrlich: Ber. d. deutsch. chem. Gesellsch., xlii, No. 1.

This, then, is what animal experimentation has done for syphilis. In a period of about seven years the cause of the disease has been established, a specific reaction for its detection has been discovered, its successful transmission to animals has been accomplished, and a drug of apparently first-rate importance has been advanced for its treatment. Those who make practical achievement the final test of the value of experimental work, could hardly ask for more convincing evidence than these splendid results provide.

VIII. PRACTICAL VALUE OF RECENTLY ACQUIRED KNOWLEDGE OF SYPHILIS

To appreciate, however, the real significance of these advances it is necessary to do something more than merely state them. No one could possibly deny their importance, regarded simply as achievements. But it is conceivable that this might not be regarded as sufficient justification for them. "Do they," it might be asked, "represent merely the triumph of scientific curiosity over great natural obstacles; or have they really made medicine more efficient, by enabling it to deal better with this disease?"

It must, in reply, be at once stated, and stated with great emphasis, that there is not a single weak point in the medical attack on syphilis which recent animal experimentation has not strengthened; that complete knowledge has in many places replaced complete ignorance; that diagnosis has been made easy where it was previously difficult, and possible where it was previously out of the question; that the efficiency of treatment has been tremendously increased; and that the way has been indicated for the solution of many, if not all, of the difficulties which still remain.

In order to justify these extreme claims let me take up, in an itemized way, the deficiencies in our previous knowledge, which have already been indicated, and apply to them the facts which animal experimentation has supplied.

1. *Possibility of Early Diagnosis.*—An early diagnosis of syphilis is now possible. On the appearance of the initial lesion, we are able—by finding the recently discovered *Spirochæta pallida*—to make a positive diagnosis of the disease. The confusion with non-syphilitic genital lesions has become a thing of the past and it is no longer necessary to waste valuable time awaiting the appearance of secondary symptoms before treatment is begun.

2. *Increased Possibility of Positive Diagnosis.*—A positive diagnosis is now possible in many cases which previously went unrecognized. The Wassermann reaction and the demonstration of the *Spirochæta pallida* are of great importance in making the sometimes difficult differential diagnosis between syphilis and the host of affections which may simulate it—a diagnosis which, without these aids, was often simply not made.

3. *Recognition of Latent Syphilis.*—It is now possible, in a large majority of cases, to recognize "latent" syphilis. Heretofore, unless symptoms recognized as definitely syphilitic were present, we had no means of detecting the disease. Now, it is possible to say not only that a man has syphilis, but (in a fairly large proportion of cases) that he has had it. This is an advance of the very greatest importance. It enables us to recognize the syphilitic nature of many affections which might otherwise be badly treated. And it promises to be of value in the solution of the vexed problem of prostitution; for we are now able to tell, with a good deal of exactness, which prostitutes are infectious, and efficient hygienic control becomes a possibility. Indeed, the means for

the detection of the disease in the absence of symptoms, the means for its positive diagnosis, and the means for its cure, having been provided, it is now possible for the community—if it choose to make intelligent use of the knowledge—to rid prostitution of syphilis. And this means, in time, the abolition of the disease from the face of the earth. If this sounds like a utopian dream, one has but to recall small-pox, which once raged everywhere, but which medicine—with slender means at her disposal—finally overcame. Sufficient knowledge is now at hand to enable us to recognize and control the main foci of infection; proper use of this knowledge will eradicate syphilis, even though prostitution itself continue, as it quite well may, to flourish.

4. *Possibility of Ascertaining a Definite Cure.*—The time when a syphilitic patient may be regarded as cured, and not only free from the disease himself, but incapable of transmitting it to others, may now be known with practical exactness. The importance of this fact in relation to the question of marriage is evident. To the syphilitic patient anxious to marry, but equally anxious not to confer on his future wife and children the dangers of the disease, medicine has heretofore been able to give only halting advice. After three or four years of treatment she has allowed him to marry, but always with some misgivings. Now, she will certainly forbid his marriage if his Wassermann reaction is positive, no matter how long he has undergone treatment, or how complete is his freedom from symptoms; and she will allow the marriage confidently, if the reaction becomes negative and remains so without treatment. Moreover, if the state ever finds itself prepared to exercise an enlightened control over the physically unfit to prevent them from passing their burdens on to posterity, medicine stands ready to indicate to the state just what, so far as syphilis is concerned, constitutes unfitness.

5. *Proof of Infectiousness of the Tertiary Lesion.*—Not least of the contributions of experimentation has been the proof of the infectious nature of the tertiary lesions. This fact has only to be stated for its importance to be understood.

6. *Increased Activity with Regard to Syphilis.*—Finally, now that the cause of syphilis is known and methods for its study in animals are at hand, the lethargy of preexperimental days, in regard to syphilis, disappears, and is replaced by enthusiastic and hopeful activity. For it must be remembered that the study of syphilis by the use of animals is yet in its infancy; that only the bare beginnings have been made. The recently acquired knowledge of the disease is still in a fluid state; and it is difficult to estimate exactly what the ultimate value of the observations made, will be—as difficult as to prophesy the exact future position of every boat in a fishing fleet, making for harbor with favoring wind and current. Yet, the wind that blows is the wind of progress; the current is the current of hope; and the haven ahead is the harbor of health. Behind, lies the troubled sea of chaos and despair. Anyone who thinks this a mere figure of speech is invited to consider the incalculable value of the achievements of recent experimentations for the host of innocent women, menaced by this disease, and the great army of unborn children, threatened with a syphilitic heritage; and to recall that the loss of animal life involved in the work shrinks to insignificance beside that represented in any meat market you choose to pass, while the amount of animal suffering entailed might easily be duplicated in every one of a thousand fisheries, to whose activities the "humane" societies give never a thought.

IX. SYPHILIS AND ANTIVIVISECTION

The importance of a consideration of syphilis in arriving at any conclusion as to the justification of animal experimentation has, I think, been made sufficiently clear. But a word should be said about the light thrown on one or two of the stock objections to animal experimentation by a consideration of the experimental investigation of syphilis.

It is often asserted that research should be so controlled and limited that only those lines of work could be followed which give reasonable promise of practical result; and that the repetition of experiments solely for the purpose of confirming the work of others, should be made impossible. This sounds like a reasonable suggestion. Yet see how fatal such a policy would have been to the development of the knowledge of syphilis.

The whole remarkable success of Schaudinn came during a research undertaken to confirm the observations of another. Siegel[36] had reported the constant finding of an organism (*Cytorrhyctes luis*) in syphilitic lesions; and the Imperial Board of Health of Berlin appointed Schaudinn—a highly trained protozoölogist—to repeat the work and see if the observations could be substantiated. Siegel's findings were not confirmed, but during the investigation, the real cause of syphilis was unearthed.

Again, who could possibly have prophesied that Ehrlich's early interest in the chemistry of the dyestuffs would lead to contributions to the therapeutics of syphilis? If it was to have any valuable results, one would have expected them in the industrial arts. Yet, starting with chemistry, he then turns his attention to protozoan disease, founds the new science of chemotherapy, hears of the work of Schaudinn and Bertarelli, becomes interested in syphilis and ends by making an important contribution to its therapeutics. One is reminded of the career of Pasteur, who began in physics, with the study of crystallography, was led into an investigation of the wine and silk industries, founded the science of bacteriology and made a contribution to therapeutics of the first importance.

Indeed the work of the various students of syphilis has been so intertwined, and the results of one of so much value to the others, that in an account of any one research most of the prominent names appear and reappear. Schaudinn, Ehrlich, Metchnikoff and Roux, Siegel, Bertarelli—it was the constant familiarity of each of these with the work of the others, and the constant attempts to confirm and advance the results already obtained, that led to the marvelous progress made. Even so remote an event as the discovery of the coal-tars, years before, by Perkins, contributed to the result; for it made not only bacteriology, but also chemotherapy possible.

It is this interdependence of research and the property of discoveries to have the most remote and unexpected value that makes restriction to experimentation, based on the probable importance of its results, unwise. Those who have become familiar with the subject by actual work in the laboratories, feel that to add to the already great difficulties of experimentation, by surrounding it with petty restrictions, would be to reward medicine for her fine achievements by crippling her, to equip her for future tasks by veiling her eyes. For it must be remembered that it is after all to medicine, and not to the "humane" societies, that the public looks for relief from disease; and when your "humane" legislation has forced your scientist into exile if he is to con-

36. Siegel: München. med. Wchnschr., 1905, p. 1321.

tinue his work of enlightenment (this is how Great Britain "encouraged" Lister!), who is to accept the high responsibility for increasing efficiency in the treatment of disease demanded by the suffering patients who will continue to crowd the hospitals? Will the "humane" societies, after making it a misdemeanor for a scientist to operate on an etherized dog without running to them for a permit, undertake to furnish us, in some other way than by experimentation, with the sorely needed facts about cancer and other unconquered plagues? Or should this work be entirely entrusted to those who have proved their fitness by their achievements in the study of syphilis?

It is high time that some protest was made against the cowardly charge that animal experimentation brutalizes men; and time, too, that those who launch it ceased to attain thereby a reputation for high moral sense in the community. The facts in the case are readily accessible; and if the charge is made in good faith, it ought to be backed by a notorious evidence of brutality in the profession which authorizes, and is in sympathy with, this "brutalizing" work. But whatever else physicians, as a class, are, brutal they most decidedly are not. Medicine can point to a group of heroes, not to be surpassed in any profession, who have testified to the sincerity of their scientific zeal by offering their own bodies as material for experiment; and until the opponents of animal investigation can match this, charges of brutality come from them with very bad grace indeed. Moreover, it is a simple fact that the physicians of any community—devoting their lives to the relief of distress—maintain a reputation for interest in others to which the term "brutal" is simply not applicable; and that in communities where experimentation is going on it is to those interested in animal investigation that the profession looks for leadership in its far-sighted campaign for the health and happiness of this and future generations. The reputation of these leaders, so far as brutality is concerned, is above reproach. The high standard of Pasteur, most kind-hearted of men, most active of experimentalists—has been maintained by his successors; and those who, in their righteous indignation, echo the outcry against experimentation on the ground of its brutalizing effect, might better serve the cause of righteousness by an inquiry, among the scientists in their own community, into the truth of this serious accusation.

If, however, this charge—so far from being made in good faith and on the basis of actual instances of brutalization of character by experiment—represents, for all its odor of piety, merely an academic makeshift for the purposes of debate, then one can but marvel at the moral standard of those who, in their concern over animals, permit themselves to make against a profession, busy with intelligent philanthropy, a charge so grave and so unjust.

CONVENIENT TABLE IN THE USE OF TUBERCULINS

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LOS ANGELES

The revival and wide use of tuberculin in the last few years has led a comparatively large number of makers of biologic products to place the different kinds of tuberculin in most common use on the market. As made by several of these firms, preparations like T. R. and B. E., presumably of the same strength, really contain a different amount of the tubercle solids in the concentrated solutions.

SYSTEM OF NUMBERING DILUTIONS OF TUBERCULIN*

No. of Dilutions	Strength Per Cent.	Compartment A		Compartment C		Compartment D		Compartment E		Compartment F	
		Fld. mg. in 1 c.c. conc. sol.	Fld. mg. in 0.1 c.c. conc. sol.	Solid mg. in 1 c.c. if 10 mg. to 1 c.c. conc. sol.	Solid mg. in 0.1 c.c. if 10 mg. to 1 c.c. conc. sol.	Solid mg. in 1 c.c. if 5 mg. to 1 c.c. conc. sol.	Solid mg. in 0.1 c.c. if 5 mg. to 1 c.c. conc. sol.	Solid mg. in 1 c.c. if 2 mg. to 1 c.c. conc. sol.	Solid mg. in 0.1 c.c. if 2 mg. to 1 c.c. conc. sol.	Solid mg. in 1 c.c. if 1 mg. in 1 c.c. conc. sol.	Solid mg. in 0.1 c.c. if 1 mg. to 1 c.c. conc. sol.
I (orig.)	100.	1000.	100.	10.	1.	5.	.5	2.	.2	1.	.1
II	10.	100.	10.	1.	.1	.5	.05	.2	.02	.1	.01
III	1.	10.	1.	.1	.01	.05	005	.02	002	.01	.001
IV	.1	1.	.1	.01	.001	.003	.0005	.002	.0002	.001	.0001
V	.01	.1	.01	.001	.0001	.0005	.00005	.0002	.00002	.0001	.00001
VI	.001	.01	.001	.0001	.00001	.00005	.000005	.00002	.000002	.00001	.000001
VII	.0001	.001	.0001	.00001	.000001	.000005	.0000005	.000002	.0000002	.000001	.0000001

* Old Tuberculin contains 1,000 mg. of Old Tuberculin to 1 c.c. Conc. O. T. (Compartment A, 1,000 mg.).

Von Ruck's T. R. contains 10 mg. of tubercle bacilli to 1 c.c. Conc. T. R. (Compartment C, 10 mg.).

Cutter's B. E. contains 5 mg. of dried tubercle bacilli to 1 c.c. Conc. B. E. (Compartment D, 5 mg.).

Cutter's and Mulford's T. R. contain 2 mg. of solid substance to 1 c.c. Conc. T. R. (Compartment E, 2 mg.).

Parke, Davis & Co.'s T. R. and B. E. each contain 1 mg. of tubercle bacilli to 1 c.c. of Conc. T. R. or B. E. (Compartment F, 1 mg.).

Von Ruck's Watery Extract contains 1 mg. of dry solids to 1 c.c. Conc. W. E. (Compartment F, 1 mg.).

In reading reports concerning patients under treatment, therefore, the dosage mentioned may be actually quite different from that which the reader has in mind from the figures given. As a rule, these firms also use different systems of nomenclature in numbering their dilutions. As a consequence physicians in the West not infrequently have patients referred to them with letters concerning the dosage of tuberculin previously used, the exact meaning of which dosage it is not always easy to understand.

The table above, which I use in dispensary and hospital work, may be worth printing because, if desired, they allow notations of the dose to be made in small space on the history cards and allow one at any time to estimate at a glance the exact amount of tubercle solids in milligrams which is contained in the dose of any dilution injected.

Starting with the original or concentrated solution, which in this system of numbering always receives the Roman digit I, the dilutions, made as is the custom, according to the metric system, are carried to as great a degree as is desired, each dilution being ten times

stronger than the dilution below it, so that 10/10 of a c.c. of any dilution is equal to 1/10 c.c. of the dilution just above.

When these tables are used, the bottles containing the dilutions are labeled with the Roman numerals I, II, III, IV, etc., and in making notations of dosage on the history cards, this number is used as the denominator. The numerator is an Arabic numeral 1, 2, 3, 4, 5, 6, 7, etc., to represent 1/10, 2/10, 3/10, 4/10, etc., of a c.c. of that particular dilution.

Thus, 3/IV O. T. would mean 3/10 c.c. of dilution IV of old tuberculin, which, as may be readily seen by reference to Compartment A of the table below, implies a content of 3/10 milligrams of old tuberculin. Likewise 3/IV T. R., if made by Parke, Davis and Company (see Compartment F), would mean 3/10,000 mg.; while 3/IV T. R. of Cutter's make (see Compartment E) would mean 3/5,000 mg.; and of Von Ruck's T. R. (see Compartment C) would mean 3/1,000 mg. The name of the maker of the tuberculin is, of course, always mentioned on the history card.

The use of some such system of numbering as this can effect, therefore, a considerable saving of time when tuberculins are used with any frequency, and may also be of convenience to those who have need from time to time to calculate the exact dosage of some tuberculin only occasionally used, or in the more accurate interpretation of dosage figures given by colleagues elsewhere.

240 Bradbury Building.

THE FORMATION AND FUNCTIONS OF HYGIENE COMMITTEES FOR UNIVERSITIES

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AND
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The position of a university or any other large educational institution in regard to its students is a peculiar one, involving grave responsibilities of many kinds. Boys and girls are brought from their homes from greater or lesser distances, and perhaps for the first time in their lives are freed from the restraining influences of home life. These students collect in various dormitories or lodging houses and mix together on the campus, in class rooms, and in various assemblages incident to university life. The responsibility of the institution is, therefore, an exceedingly grave one. It takes the place of the parent or guardian to this mass of students. The danger of epidemic diseases, which is always present when numbers of people are brought together, is constantly present. That institution which looks only to the education of the mind through the completion of a fixed course of study falls very far short of its true functions. Those of us who are interested in the teaching of hygienic life see in every educational institution a golden opportunity to spread the doctrine of good living. Education, after all, is designed to fit one for a useful career in life and such a career demands first and foremost a vigorous and healthy body.

Most of our institutions, like Topsy, have "just growed." The old buildings which are objects of reverence and affection to many were built at a time when our youth perhaps possessed more vigorous constitutions than those which the present-day fast living has brought about, and when the principles of lighting and ventilation were not as well understood as now. Partly through reverence and partly through the necessities of the case, almost all institutions are still utilizing many of these old buildings, and large classes are held in rooms absolutely unfit to furnish suitable accommodations.

HISTORY OF THE HYGIENIC MOVEMENT AT THE UNIVERSITY OF WISCONSIN

A history of the movement for better things in health matters at the University of Wisconsin will serve to elucidate many of the considerations which we wish to bring before you. Although the university is still comparatively in its youth, having recently celebrated its fiftieth anniversary, many of the buildings are antiquated as regards hygiene. A few years ago, several of the professors, recognizing that there was no one connected with the university whose special duty it was to look after the sanitation of the buildings and the health of the students, asked the president to appoint a committee on university hygiene. The first committee was composed of representatives from the departments of bacteriology and hygiene, physiology, physical training and home economics. The work was developed along several lines.

Ventilation.—First, an attempt was made to secure better conditions in the class-rooms and offices. Where artificial means of ventilation were not provided the windows were fitted with window-boards which permitted the raising of the lower sash without producing direct draughts on the occupants of the rooms. In most of the buildings a combined system of ventilation and heating had been installed. Direct radiation from the steam radiators was supplemented by passing air over steam coils by means of fans and blowing this into the rooms through galvanized iron channels. This apparatus was used for the most part only in extremely cold weather. When the weather was not cold enough to require the use of both systems no artificial ventilation was given at all. The committee insisted that the fans should be used for ventilation and not merely to supplement the heating of the rooms. This improved matters considerably, but still many complaints came in to the committee from professors and students alike that the rooms were stuffy and close, causing headache and sleepiness.

Humidity.—A study of the humidity of the air in a number of these rooms was next undertaken, and it was found that the moisture was frequently as low as 20 per cent. and some times as low as 14. The moistening of the air was brought about by the introduction of steam jets into the ventilating flues at or near the fan, so that the moisture would be thoroughly mixed with the air passing into the rooms. Examination of these rooms after this showed that the air was fairly well moistened and the comfort of the occupants of the room was greatly increased. Several of the professors who had used these rooms for ten or more years stated that never in their experience had they lectured with so little fatigue and discomfort. The committee has several times asked for funds to make more complete studies of the air of class rooms, but it has not been able to procure them up to the present time.

It is not believed that conditions at Wisconsin were worse than those at many other institutions, and yet the actual state of affairs was represented by the following incident. The matron of the woman's dormitory went

into the room of one of the girls and, noticing the bad air, called the girl's attention to it, and received this reply: "What, is the air bad here? Since coming to the university I have become so used to bad air that I do not notice it any more."

Water.—The university had a pure water-supply, but everywhere the common drinking-cup was in evidence, some installed in the early days of the university, but some quite recently. The committee succeeded in having all of these drinking-cups abolished and in their place sanitary drinking fountains (Fig. 1) have been installed. These fountains were devised at the university and made by the mechanics connected with the institution. The cost was estimated at $5 each.

Sweeping.—A third matter to be considered was the cleansing of the buildings. Dry sweeping and dusting were the usual customs. In several of the buildings the committee succeeded in having vacuum cleaners introduced. In two buildings permanent systems have been introduced, and in two, portable machines are being tried out. In selecting a type of vacuum-cleaner, the committee found that while there was evidently a good deal of difference in the relative cleansing power of the machines, there was no described method of testing them. Some members of the committee have undertaken a study of this problem, the results of which are about ready for publication. In anticipation, however, it may be said that, while the permanent systems vary in their ability to clean, they are all satisfactory from a hygienic standpoint; that the portable cleaners are all, so far as tested, less efficient in their cleaning power, and that they all have an insanitary feature of very considerable importance, namely, the discharge of a large number of bacteria into the air again. Such machines, instead of reducing the danger from air-borne germs, may actually increase it.

Fig. 1.—Sanitary bubble drinking fountain.

Toilets.—The toilet rooms of the university have been objects of especial care. Where possible, ventilators have been put into these, but unfortunately change in such facilities often involves a heavy expense and in most instances it has been impossible so far to make any radical changes. The supervision exercised has, however, improved matters considerably. The roller towel has been banished from the university almost entirely and in its place individual towels are provided. A special towel-holder and soiled towel box in one, so arranged that the top towel of the pile may be used and then passed over a curved rod into the compartment for soiled towels (Figs. 2 and 3) has been installed throughout the university. It is the device of three members of the committee and has served an excellent purpose. There is some increase in the expense of laundry, but we feel that this is money well spent. As an example of some of the difficulties which such a committee has to contend with at times we may relate that in one department of the university the dean objected to the increased laundry expense, slight though it was, and, without consulting the committee or any one else, had these small hand-towels sewed together into roller towels.

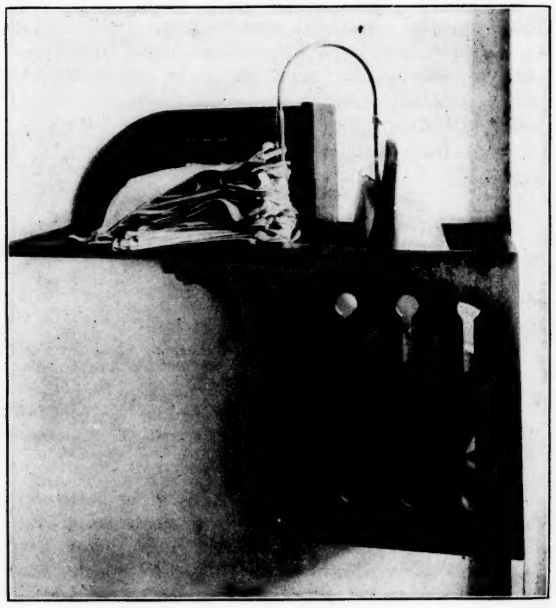

Fig. 2.—Individual towel distributor.

Gymnasium.—At the University of Wisconsin physical training is compulsory during the first two years of student life. Consequently the university gymnasium is likely to become an important focus for the distribution of disease; but if properly managed it may serve as a valuable center of educational influence along sanitary lines. The committee went vigorously to work at this building. Spitting was common, some of the instructors even believing that it was necessary to spit during exercise. Members of the committee attended all indoor games and kept watch on the careless spitting of the players. In two years' time this habit has been entirely stopped and it is a very rare occurrence to see anyone spit about the gymnasium, or to find the marks of expectoration on the floors. Under the influence of the committee the gymnasium has been cleaned from top to

bottom, new mats have been provided, varnish and whitewash applied, and very important changes made in the toilet-rooms. Formerly any slight wound in the gymnasium meant suppuration and slow healing. This condition of things has greatly improved. Every student was formerly familiar with what is generally known as "gym itch" and "gym sores." While these still exist to a certain extent, conditions have improved. The committee has made a number of analyses of the water in the swimming-pools, both chemical and bacteriologic, and the hygienic laboratory is now preparing to publish the result of these examinations.

Lodging-House Inspection.—Wisconsin has no dormitory system (with the exception of one building for girls, which does not lodge more than one-tenth of the total number). The students are therefore domiciled at private rooming and boarding houses in various parts of the city. The Greek-letter fraternities and sororities flourish, and there are upward of thirty lodges in the town. The university regents, on the request of the committee, have for two years past granted money for the inspection of student boarding and rooming houses. A trained nurse is employed, one hundred and seventy houses have been inspected and a record made of them. A few houses have refused to allow inspection, but as a rule the landlords and landladies have cooperated with the committee in trying to improve the standard. It is proposed to make from one to two inspections yearly and to provide students with lists of the accredited houses; that is, those houses which have such qualifications in regard to lighting, ventilation, heating, bathing and toilet facilities as render them desirable habitations.

Medical Adviser.—The university had never made provision for a medical adviser for the students. When a student was sick he went to one of the physicians in the city, or not, as he saw fit. There was no system even of keeping a record of illnesses. Cases of small-pox have appeared in the class-rooms and in 1908 a severe outbreak of typhoid fever (forty-one cases in one boarding-house) occurred which would probably have been prevented had proper medical supervision, free of charge, been provided. Excuses were granted for non-attendance at classes, etc., by physicians who had no concern with the university. The committee spent a great deal of time in trying to evolve some plan for the correction of this evil and finally recommended to the president the appointment of a medical adviser. This proposition was considered favorably by the board of regents and the matter was then put into the hands of the executive committee of the medical school. Several of its members were also members of the hygienic committee. In February, 1910, an office was opened and it was not long in proving very popular with the students. In less than one year the staff has been enlarged from one physician to three, with three assistants, two of whom are trained nurses. We believe that much epidemic sickness of a minor character has been avoided by consultation with the university physician, who insists on isolation in such cases. More than 3,000 students have consulted the medical adviser during the year 1910.

Emergency Kits.—Accidents of greater or less severity not infrequently happen in the laboratories of the university, especially in chemistry and engineering. Emergency kits, designed by the committee, have been placed throughout the university. They contain absorbent cotton, assorted bandages, a tourniquet, adhesive plaster, safety pins, carron oil, boracic acid ointment and aromatic spirits of ammonia. Each article is plainly labeled. Those on the drugs give the indications for use and the dosage. Charts giving directions for first aid to the injured have also been distributed. Those obtainable have not been satisfactory and the committee is now taking steps to obtain better ones which will be distributed.

Education.—Apart from the practical work which has been outlined, the committee has been strongly impressed with the necessity of educating students along hygienic lines. It has tried in every way to give and to foster instruction in the principles of hygiene. The department of bacteriology and hygiene has for some time wished to make a primary course in hygiene compulsory on all students entering the university. The committee has aided the department as far as possible in this work. Up to the present time it has seemed impossible to require work from each student in the university, but both the department and the committee are impressed with the necessity of this and are working toward such an end. In the meantime an elective course has been offered. This is primary in character and no preliminary studies are required. It consists of eighteen lectures with assigned reading and an examination, for which one hour of credit is given. This course is repeated in each semester of the scholastic year. The lectures are given almost entirely by men connected with the university, especially those in the departments of physiology, physical training, bacteriology and hygiene and chemistry. At the request of the committee the regents have for several years granted a fund of $300 for lectures. The object of these lectures is to bring to the university men prominent in sanitary work, hoping thereby to interest the professors as well as the students in the study of hygiene, and to convince them of its importance and its practical value.

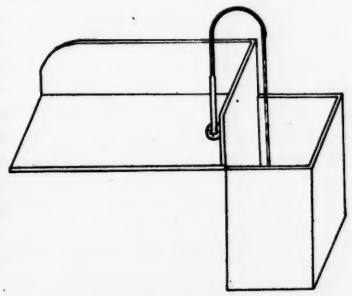

Fig. 3.—Drawing of towel distributor.

MEANS AND METHODS OF HYGIENIC IMPROVEMENT

Institutions of high learning should have their buildings perfectly equipped from a sanitary standpoint. Many institutions, in which technical departments exist, have model machine shops, creameries, cow-stables, libraries, etc. They are leaders in these various lines. Schools, colleges and universities ought to lead in sanitary construction, sanitary equipment, and sanitary care. Class-rooms and laboratories ought to be models of sanitary excellence as well as of convenience and attractiveness. The educational value of such buildings far outweighs any additional expense involved.

Exhibits.—In connection with the educational work which can be done along the line of hygiene, mention ought to be made of the value of exhibits, museums, etc. Collections of models and plans are excellent means of public education. Permanent museums of hygiene are desirable, not only as an aid to class work, but for the instruction of the general public, and it would seem desirable that various sanitary appliances might be exhibited where the public could study them. Such

museums should contain also exhibits which would illustrate the important advances made along the line of public health, and the results which have been accomplished. They should contain models showing the various aspects of water-supply and purification, the disposal of sewage, the details of milk-production and distribution, working models illustrating methods of ventilation, types of bubble fountains, etc., etc.

Janitors.—In Wisconsin, as elsewhere, we are largely dependent on the corps of janitors for the proper care of the buildings and the observance of regulations concerning their care. The superintendent of buildings, who has charge of the force of janitors, has agreed to call them together for instruction, and the committee has outlined a course of lectures for them in which such subjects as lighting, heating, ventilation, cleaning, etc., will be discussed in a simple and practical manner.

Organization and Personnel of a Hygiene Committee.—Our experience has taught us that in order that hygiene committees may do efficient work certain features in regard to organization and the powers given to them are necessary. We have not been able to solve certain questions as yet, but the following points seem clear:

The hygiene committee should be composed of men who are experts in various matters with which the committee has to deal, and it would seem desirable to have a representative from such departments as chemistry, bacteriology, engineering (as heating or ventilation expert), physical culture, and home economics. The chairman of the committee should be the health officer of the institution and would ordinarily be a physician, although what is really needed is a person with special training in health matters.

Of more importance perhaps than the personnel of the committee are its functions and powers. If it is an ordinary faculty committee, it has only the power to make recommendations and to enforce such regulations as may be adopted by the faculty. The committee ought to possess this power, but in addition should have authority derived directly from the governing body—the regents or trustees—since its greatest service to the institution would often come through the duties which it might perform for this body, and its value depends very largely on the powers delegated to it by such a governing body.

This committee should have power to pass on the location, construction, and arrangement of new buildings so far as these items have sanitary significance. It should have the power to dictate the selection of such parts of the equipment as have hygienic significance and to decide on the way in which the buildings must be kept. This would include the method of running the ventilating apparatus, the regulation of heat and moisture in the rooms, the way in which the rooms are to be cleaned, the type of vacuum-cleaner, the kind of water, the type of drinking-fountain, and similar matters. In matters pertaining to the health of the students, this committee, through its chairman, ought to have practically the same powers as conferred on boards or commissioners of health, which would include authority when infectious diseases exist to enforce quarantine, and to disinfect the buildings of the institution, or the rooms of students, when these are not properly cared for by the local health authorities.

In institutions in which dining-rooms, lunch-counters, etc., are conducted in university buildings and under the university authorities the hygienic committee should have supervision of the food-supplies so far as expert advice is needed, and should from time to time see that the preparation of food is well carried out. Where this service does not exist or where it is utilized by only a portion of the students, the committee should be active in the inspection of boarding-houses, and in the examination of public food supplies, such as milk, ice, etc. The work devolving on the committee in this regard will, of course, vary with the enforcement of the laws in individual cities in which the institution may be located.

The cost of analyses of water, milk, food, etc., will vary with the size and equipment of the institution. Generally speaking, however, the cost will be small, as most institutions are provided with such facilities. Whatever the cost, it is money well spent. Preventive medicine is the cheapest life-insurance which can be taken out.

PERIPHERAL NEURAL ATROPHY OF THE THENAR MUSCLES

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In a recent communication[1] Dr. J. Ramsay Hunt described a clinical type of occupation neuritis affecting the deep palmar branch of the ulnar nerve, characterized by a purely motor syndrome, namely, atrophy of the hypothenar and other small muscles of the hand supplied by this nerve. In the present paper I wish to describe and to illustrate a similar motor syndrome, characterized by atrophy of those thenar muscles (abductor, opponens and part of the flexor brevis pollicis) supplied by the median nerve, due, most probably, to compression of this nerve in some part of its course.[2] The by no means remote resemblance of these thenar and hypothenar types of atrophy to progressive spinal muscular atrophy, and, in some degree, to toxic degeneration of the lower motor neurons, renders their recognition a matter of some importance. Obviously prognosis and treatment will vary according to the type of pathologic condition with which we are dealing. In the neural and toxic types the outlook is fair or good; in the progressive spinal type it is, of course, unfavorable.

ANATOMY OF THE MEDIAN NERVE

Between the median and the ulnar nerves in the palm of the hand there is an interesting similarity of arrangement. While still in the forearm, both of them give off palmar cutaneous branches; and having entered the palm of the hand, both are placed in such mechanical relations as very easily to permit of their being subjected to undue pressure, with consequent interference with function. The deep branch of the ulnar dips between the tendons of the abductor and flexor brevis minimi digiti and is here subject to compression, while the branch of the median to the thenar muscles passes over the margin of the annular ligament of the wrist where it, too, may suffer injury in a mechanical way. The palmar cutaneous branch leaves the median at a variable distance above the wrist. It becomes superficial near the upper margin of the anterior annular liga-

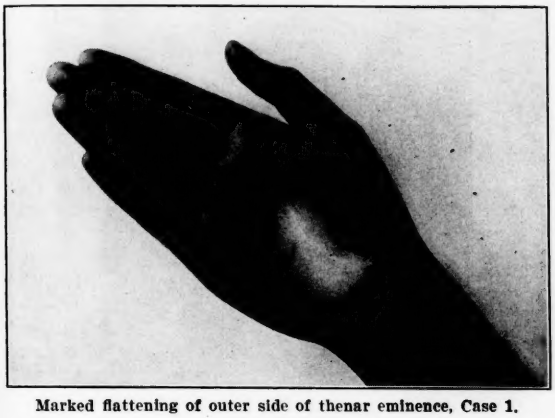
1. Hunt, J. R.: Occupation Neuritis of the Deep Palmar Branch of the Ulnar Nerve, Jour. Nerv. and Ment. Dis., November, 1909.

2. After this paper was completed in manuscript Dr. Hunt published (Am. Jour. Med. Sc., February, 1911) another valuable paper, The Thenar and Hypothenar Types of Neural Atrophy of the Hand, in which he covers precisely the same ground as that traversed in the present paper. It would seem, however, that the condition is of sufficient importance to warrant this supplementary description.

ment by piercing the deep fascia between the flexor carpi radialis and the palmaris longus. It supplies the skin of the palm. The thenar branch of the median is a short nerve which arises below the anterior annular ligament and curves outward toward the base of the thumb. It breaks up into filaments which supply the abductor pollicis, the opponens pollicis and the superficial head of the flexor brevis pollicis. These terminal filaments lie between the abductor pollicis and the superficial head of the flexor brevis pollicis above and the opponens pollicis and the deep head of the flexor brevis pollicis below. Compression in the main trunk of this nerve, if it occurs, must occur as the nerve passes to the inner side of the flexor brevis pollicis and over the margin of the anterior annular ligament; and such compression will give rise to the syndrome about to be described.

THE SYNDROME OF NEURAL THENAR ATROPHY

The symptoms of peripheral neural atrophy of the thenar muscles are precise and may be easily recognized. They are atrophy and paralysis (or weakness) of those muscles supplied by the thenar branch of the median. In the two cases here recorded no sensory changes whatever could be discovered on careful examination, nor did



Marked flattening of outer side of thenar eminence, Case 1.

the patients complain of any changes referable to the lesion. The muscles affected were, in both instances, the abductor pollicis, the opponens pollicis and the superficial head of the flexor brevis pollicis. In these muscles there was marked wasting, as the illustration indicates. The muscles involved failed to respond to electrical stimulation through the median at the elbow; when the current was applied to the muscles directly there was no response to faradism and a very feeble reaction of degeneration to galvanism. Voluntary movements in the wasted muscles were abolished, and nearly a year later showed little, if any, return. I never observed fibrillary twitchings in the affected muscles, nor were they sensitive on pressure. All the other intrinsic muscles of the hand were normal in respect of voluntary movements, nutrition and electrical response.

CASE 1.—Miss A. B., aged 22, single, a stenographer by occupation, some two months before coming under observation, began to experience some difficulty in retaining hold of and manipulating her pen. At about the same time she began to experience some limitation of facility in her use of the typewriter. Soon she noticed that the ball of the thumb was beginning to waste and this it was which caused her to seek medical advice. The wasting, after she noticed it, went on very rapidly. When first examined the thumb presented the appearance shown in the illustration. There were no sensory alterations and no subjective discomfort in the thumb. The abductor pollicis, opponens pollicis and superficial head of the flexor brevis pollicis were so wasted as to be scarcely distinguishable as muscles. They did not respond to indirect electrical stimulation nor to faradism applied directly. To galvanism there was a feeble reaction of degeneration in the small amount of muscular tissue remaining. The voluntary movements subserved by these muscles were in abeyance. After almost a year of massage and electricity (galvanic and sinusoidal) there seemed to be no appreciable improvement.

CASE 2.—Mr. X., aged 32, married, an elevator operator, while operating an elevator controlled by a forward and backward lever, observed that the muscles of the thumb of his right hand were smaller than those on his left hand. To this, however, he paid no special attention, for two reasons—he suffered no pain or other discomfort, and he experienced no difficulty in his work. He states distinctly that many times while closing the doors of the elevator shaft in the New York sky-scraper where he was employed, he was accustomed simultaneously to push the side of the handle of the lever with the ball of his thumb. It may be imagined that he did this many thousand times in the course of a week. Having changed his occupation to that of a butcher he noticed the first time he tried to handle a knife that he had much difficulty in doing so. Hence his seeking medical attention. The muscles involved in the wasting, their abnormal electrical reactions and the limitations of voluntary movement were precisely similar to those observed in Case 1. The same treatment was carried out as in Case 1, with somewhat better, though by no means brilliant, results. After eight months of faithful treatment there is some slight access of voluntary power with an appreciable, though small, increase in muscular growth.

The distinguishing marks of peripheral neural atrophy of the thenar muscles are: (1) precise limitation of atrophy and motor defect to the opponens pollicis, abductor pollicis and superficial head of the flexor brevis pollicis; (2) reactions of degeneration confined to these muscles; (3) absence of subjective sensory changes; (4) absence of objective sensory defect; (5) absence of fibrillary twitching; (6) rather rapid onset of atrophy and weakness.

222 Broadway.

A CASE OF ORIENTAL SORE (DERMAL LEISHMANIOSIS) IN A NATIVE COLOMBIAN

S. T. DARLING, M.D., AND R. C. CONNOR, M. D.
ANCON, CANAL ZONE

Oriental sore (dermal leishmaniosis), a disorder endemic in the Levant and the East, has been detected in a few localities in the New World: São Paulo and Bahia, Brazil, French Guiana and Panama. When the latitude and climate of the Oriental countries where the sore is endemic are considered, together with the fact that the autochthonous disorder is present in the New World, so far having been detected between 23.5 S. and 8 N. latitude, it is natural to presume that the disease will be found in Central America, Mexico, and some of the southern states, when especially looked for. A case of autochthonous oriental sore was discovered by one of us (S. T. D.) in the Canal Zone and renewed efforts have been made to find other cases and to ascertain if some have been overlooked in the past.

These facts should be noted by practitioners and laboratory workers in the southern states and seaport cities where examples of this type of ulceration may be encountered. They must also be taken into consideration in the diagnosis of all chronic ulcers in this region. Film prep-

arations from ulcers on exposed parts of several months' duration should be carefully examined for the presence of the pathogenic agent of Oriental sore (*Leishmania tropica*). A preliminary experience with the cultural forms of trypanosomes or with insect flagellates—*Herpetomonas* or *Crithidia*—is helpful in knowing what to search for when the microorganisms are sparse.

Specific diagnosis is important because the infection is undoubtedly transmitted by flies or mosquitoes and the ulcers should be properly treated and protected by dressings from the visits of suctorial invertebrates.

The case reported here is the third one found to date and illustrates certain peculiar features of the disease: the chronic eroding character of the ulcer, its location on an exposed part, the presence of a second ulcer near by (auto-inoculation), the history of a fly-bite, and the

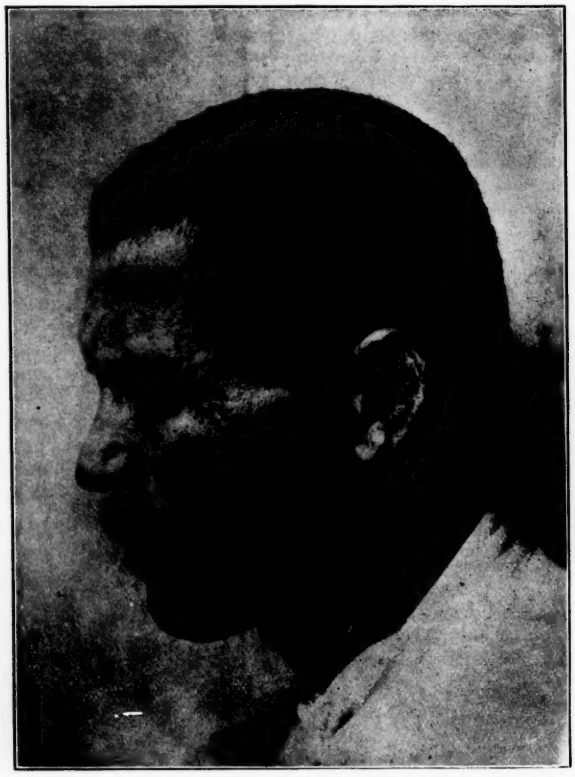


Fig. 1.—Patient with oriental sore on left ear.

difficulty experienced in this case in finding the pathogenic agent.

It should be mentioned that each one of the three patients affected with this disorder who have been examined up to date gave a history of being bitten by a fly out in the bush. No case has arisen as yet within the zone of sanitation.

CASE REPORT

History.—A. V., Hospital Number 88,593; aged 43; native Colombian laborer; born in Cartagena, came to Panama during the régime of the Compagnie universelle du Canal interocéanique, and has lived continuously in Panama for twenty-two years. Recently he had been working with surveying parties in the bush near Frijoles. He was admitted Nov. 25, 1910, with well-developed pulmonary tuberculosis. The peculiar lesions on his left ear were examined on two occasions for the presence of *L. tropica* and on the occasion of the second examination after a crust had been permitted to form, a few characteristic microorganisms were detected.

Examination.—When seen December 21, his left ear was of a dusky, brawny color, somewhat swollen, and the skin rather tense. The margin of the helix was eroded for about 3 to 4 cm. and covered with a depressed, tough, dry crust. At its junction with the lobule there was a second smaller ulcer, circular in shape, about 1.5 cm. in diameter, covered with a flattened tough crust (auto-inoculation). The appearance of the ulcers was suggestive of lupus or rodent ulcer and of Oriental sore. A protective dressing of boracic acid ointment was applied constantly and some improvement in the appearance of the lesions was noted, but the infiltration of the margin of the skin about the ulcers increased. The patient refused more radical treatment on account of his feeble health.

The larger ulcer made its appearance, according to the patient, six or eight months before the date of his admission to the hospital. He believed that it followed a fly-bite, but on inquiry about the variety of fly and additional circumstances connected with the development of the sore, rather a fanciful statement was made by the patient. This is given as it conveys the natives' notion about the cause of this chronic type of skin ulceration.

The fly which the natives believe causes the ulceration is called by them *mosca bayano*. This fly, they say, is found only in the woods in the large yellow flowers of the bayano, a

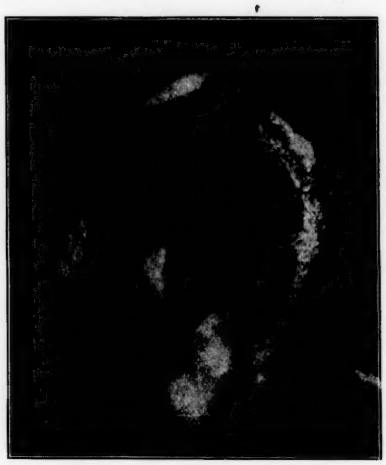


Fig. 2.—Closer view of oriental sore.

jungle plant. It was impossible to get from the patient a very exact idea of the kind of fly. When shown a number of specimens of *Tabanus, Musca, Stomoxys, Pyrellia, Compsomyia,* and others, he thought the fly was about the size of *Stomoxys calcitrans,* but when he described its habits he said that on approach, the flies darted away so quickly that one could not make out either color or markings. Again the patient said that the fly did not really bite or draw blood, but deposited white feces which made the skin rot.

After the visit of the fly the place began to itch, a blister formed, which was scratched considerably, increased in size and became purulent. An ulcer soon appeared, which, with each removal of the scab, became deeper and larger.

Whatever the mode of infection may have been, there is no doubt of the cause: smears taken from just beneath the raised margin of the crust, when stained by Hastings' and Giemsa's stains, contained a few intracellular and extracellular specimens of *L. tropica*, exactly like those described in the case to be published by one of us (S. T. D.) in the *Archives of Internal Medicine.*

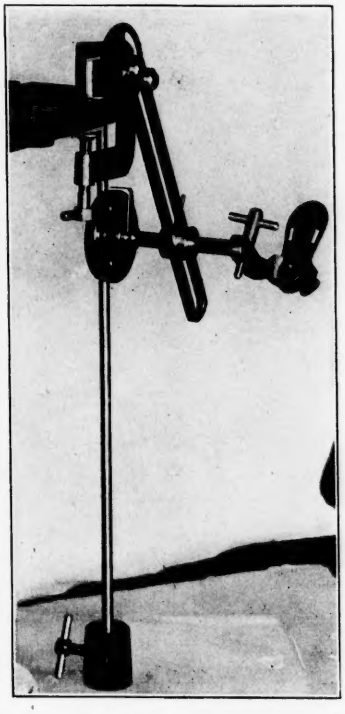
Regulation of Diet.—An ideal diet should be one with not less than 1,500 calories in the twenty-four hours, containing the foodstuffs in as assimilable a form as possible, entailing the least work on the eliminative organs in ridding the body of waste products.—**A. Eustis,** in *New Orleans Medical and Surgical Journal.*

MINIATURE EXERCISE MACHINE FOR INFANTILE PARALYSIS *

MAX STRUNSKY, M.D.
NEW YORK

In treating chronic infantile paralysis by massage, electricity and passive motion of the paretic muscles we must not forget that the seat of the disease is not in the muscles, but in the anterior, gray cornu of the spinal cord, and that atrophy and degeneration in this disease are not limited to the muscles alone, but involve all the structures that enter into the muscular contraction, chiefly, the spinal nerves, the motor cells in the spinal cord, the conducting tracts, the motor brain centers dominating the affected muscles, as well as the weakening of the will power to concentrate on these muscles.

Function is the antagonist of atrophy and degeneration. Massage, electricity and passive motion exercise the muscles, but they do not exercise the other structures involved in the voluntary muscular contraction, and the effect of such exercise — whatever it may be—is limited to the muscles. Permanent benefit to the paralytic muscles is produced only by voluntary exercise because in such exercise the structures involved are simultaneously and cooperatively functioned. The effect of voluntary muscular contraction is to exercise the will power and the atrophic motor brain centers and, by reciprocal action, to develop the motor cells in the spinal cord and the strength of the muscles.



Miniature Zander machine for exercising limb in infantile paralysis. May be attached to a table or chair.

That the spinal motor power can be developed is proved by the improvement that takes place in infantile paralysis often years after the original attack, and by the increased strength in the paralytic limb after scientific and persistent treatment, and by the fact that a great many children, especially those that are mildly affected, gradually outgrow their trouble.

Improvement in chronic infantile paralysis cannot be accounted for by the regeneration of the destroyed motor cells in the spinal cord. The pathologic law that dead organic cells never regenerate is fixed. Improvement can be explained only by the development of the motor gray matter in the spinal cord based on the physiologic law that cells increase in size and strength with function. This is accomplished by the use of the paralytic limb, by muscle education, whereby the child develops his mental power to force the contraction of the paretic muscles, and by the natural growth and evolution of the cerebrospinal system during childhood.

Voluntary exercise of the paretic muscles, the most important element in the treatment of chronic infantile paralysis, is, unfortunately, monotonous and the child's feeble attention soon wanders from its work. The machine illustrated gives the child something to do, with the result that more voluntary muscular contractions are accomplished. The machine is also labor-saving, inasmuch as it assists and resists the movements of the paralytic limbs automatically and takes away this strain from the person supervising the physical culture.

The instrument shown in the illustration is a miniature Zander machine. It is small, portable, cheap, and can be attached to a table or chair. The child sits on the table or chair to which the machine is attached and the paralyzed limb swings the handle. The resistance to the movement is regulated by the length of the pendulum and the "assistance" by the angle of the handle.

Resistance to the movements must be gradually increased. This cannot be done with the hand, because it is hard to remember the exact force exerted at the previous treatment. By regulating the length of the pendulum the resistant force is controlled to a fraction. The gradually increased length in the pendulum is also the record which tells of the amount of improvement that has taken place in the paralytic limb in a given time.

24 West Forty-Fifth Street.

* Demonstrated to the Orthopedic Section, Academy of Medicine, New York City, March 17, 1911.

THE TRANSPLANTATION OF BONE FOR CORRECTION OF DEPRESSED DEFORMITIES OF THE NOSE

REPORT OF CASES *

WILLIAM WESLEY CARTER, A.M., M.D.
Assistant Surgeon, Manhattan Eye, Ear and Throat Hospital
NEW YORK

It is not my purpose in this paper to discuss the fundamental principles of bone transplantation in the human body, nor do I intend to review in detail the work of the various experimenters in this field of surgery. Suffice it to say that nearly all that has been written on this subject has had to do with supplying defects in the various bones of the body, chiefly those of the head and the long bones, while little has been said about the introduction of bone into the soft tissues, where the conditions for its nourishment and growth must differ widely from those where the graft is used to supply a deficiency in the continuity of another bone.

It is generally admitted (1) that the autoplastic operation, i. e., the transference of bone from one part of the body to another gives the quickest and best results; (2) that homoplastic transplantation, i. e., from one animal to another of the same species, is usually successful; (3) that heteroplastic transplantation, i. e., from one animal to another of a different species, is unsuccessful.

* Read before the New York Academy of Medicine, Section on Laryngology, Dec. 28, 1910.

The belief is almost unanimous that it is necessary to include the periosteum with the graft; with this view, however, I do not agree.

There are a variety of opinions as to the fate of the implanted bone, the majority of writers believing that it is resorbed and new bone deposited in its place by the periosteum. This however, so far as I know, is the observation of those who have done only the homoplastic operation and who removed the periosteum with the graft; their work, therefore, sheds little light on the ultimate fate of the bone in my cases, for each of my patients furnished his own tissue for transplantation, and no periosteum covered the graft. The observations of all these writers relate to implantation for defects in the various skeletal bones, and however interesting and pertinent they may be to the work in hand, the scope of the present paper does not admit of their discussion.

Depressed deformities of the nose, from a surgical point of view, may be divided into two classes: (1) cases without loss of bony tissue; (2) cases in which a large part of the bony framework of the nose has been destroyed.

Fig. 1.—Patient in Case 3 before operation.

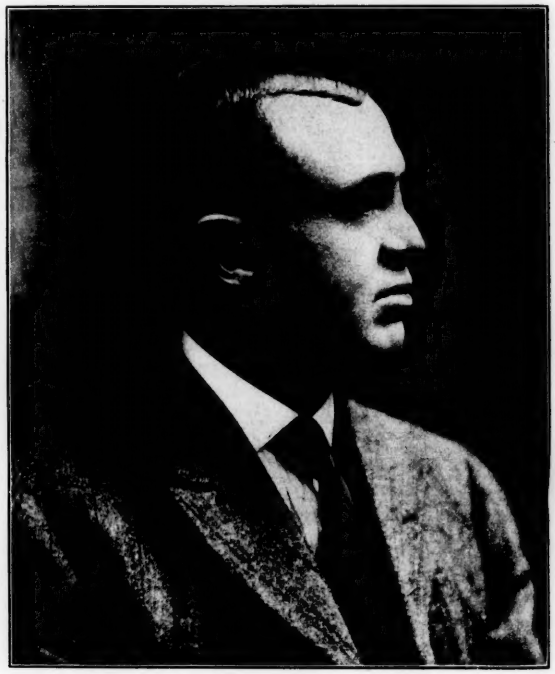


Fig. 2.—Patient in Case 3 after operation, from an unretouched photograph.

Cases of the first class are suitable for my bridge-splint operation, which I have described[1] in a previous paper, and which I have used with satisfaction in about forty cases.

But patients in the second class, as I stated in my first presentation of the subject, cannot be relieved by this method, for the success of the bridge-splint operation depends on the presence of a sufficient amount of bony tissue in the nose to retain it in the corrected position after the removal of the supporting bridge.

The cases which I report are from the clinic of Dr. Harmon Smith at the Manhattan Eye, Ear and Throat Hospital. Each patient had a depressed deformity due to traumatism, and each had suffered considerable loss of bony framework of the nose.

The deformity in each case being clearly due to the deficiency in bone, it occurred to me that this might be supplied by transposition of bone from another part of the body; my idea being that the transplanted tissue would receive only a temporary injury, and that it would continue to live and would take part in the process of repair in its new position in the nose.

I decided to use the rib for the following reasons:

1. A portion of the rib is easily removed, especially about the middle of the ninth rib, where the muscular covering is very thin. The patient is caused no inconvenience, and the resected portion is quickly reconstructed from the periosteum. This new growth of bone is hastened by the movements of the chest, for it has been found that a certain amount of irritation is favorable to bone-production. According to Ollier from three to eight months are required for the construction of a bone of considerable size, while he has known a metacarpal bone to be restored in forty days.

2. The shape and structure of the rib favor its use for this purpose. The rib is composed of cancellous tissue covered with a thin layer of compact bone. When the bone is split and the cancellous tissue removed, the strips of compact bone can be easily shaped to suit the deformity and, if the occasion demands it, several layers of this bone can be superimposed. It is necessary to remove the cancellous tissue, as this does not add to the vitality of the graft. In cases in which implantation has been made for defects in the long bones and the medullary tissue has not been removed, it has caused an irritation and aseptic fever.

Furthermore, I believe that the rib is well adapted for transplantation purposes, because it is so abundantly

1. Carter, William Wesley: The Correction of Depressed and Irregular Deformities of the Nose by Mechanical Replacement, THE JOURNAL A. M. A., Dec. 4, 1909, p. 1893.

supplied with minute nutrient foramina. This can be easily demonstrated by examining the surface of a rib with a lens and comparing it with the tibia.

My reasons for removing the periosteum from the grafts are: First, it is easier to resect a rib without injuring the pleura by shelling it out of its periosteal covering. Besides it is desirable to leave the periosteum for the reconstruction of the rib. In the second place, I believe that the bare bone is more quickly and surely nourished by the connective tissue envelope which quickly covers it when it is introduced into the soft tissues of the nose. In this location, all we want is sufficient nourishment for the implanted tissue, we have no desire to grow bone; hence we can dispense with the osteogenetic layer of the periosteum.

The operation in all three of my patients was essentially the same.

The skin over the nose and over the ninth rib on the right side is prepared for an aseptic operation; a short, transverse incision is made down to the bone at the nasofrontal suture. Through this incision the skin and subcutaneous tissues over the dorsum of the nose are elevated with a long, thin, two-edged knife, curved on the flat. (A Seiler septal knife answers the purpose very well.) Above this incision the tissues, including the periosteum, are elevated for about three-eighths of an inch. This wound is covered with sterile gauze. The ninth rib at about its middle is then exposed for two inches and shelled out of the periosteum and removed. I then split this section of rib in its transverse diameter, scrape off its medullary portion and shape one of the strips of bone to suit the deformity. This is then inserted into the wound in the nose previously made for its reception, care being taken to insert the upper end under the periosteum over the nasofrontal process. Both wounds are then irrigated with sterile salt solution, closed with silk sutures and sterile dressings applied. The dressings are changed for the first time on the seventh day and the sutures removed two days later.

CASE 1.—The patient was a little girl, aged 6, who, when 2 years old, fell on her nose, fracturing it. The nose retained its infantile type, developing broad and flat and scarcely protruding beyond the general level of the face. On examination, no nasal bones could be demonstrated. After the operation, which was performed on June 21, 1910, the profile was almost perfect and has remained so up to the present time.

CASE 2.—This patient, a woman, aged 25, fell on her nose when she was 7 years old, the injury in this case being followed by septal abscess. There is no history of specific infection, and the woman says that she has always enjoyed the best of health. The deformity was marked and was of the flattened and concave variety.

Operation was performed on June 25, 1910. In this instance two layers of bone grafts had to be superimposed. When the deformity had been completely corrected the tension on the skin was so great that it became blanched; so, fearing that sloughing might occur, I had to slip the transplanted bone up a little, which left a slight depression near the tip. The bridge, however, is completely reconstructed and the result is satisfactory. There has been no retrograde change in the profile up to the present time, seven months after the operation. The bone is firmly imbedded and interstitial union seems to have occurred between the two implanted fragments.

CASE 3.—A railroad man, aged 47, always healthy, and having no specific history, was knocked down by a train on Dec. 14, 1908. In addition to other severe injuries, his nose was almost completely destroyed (Fig. 1). The nasal bones, the nasal processes of the superior maxillæ and the septum were involved. Erysipelas followed the injury and much bony tissue sloughed out. The bridge was badly depressed and flattened, and a large scar bound the skin to the subjacent tissue. The septum was almost completely destroyed. The case presented a very unfavorable outlook for correction by any method of treatment.

Operation, which was done on Oct. 20, 1910, was somewhat tedious, owing to the large amount of scar tissue making it very difficult to elevate the skin over the dorsum of the nose, The elevated flap, too, was very thin, owing to the large destruction of skin at the time of the injury. A piece of the rib about 2 inches long was inserted, one end extending well down to the tip of the nose, and the other resting on the nasal process of the frontal bone. The normal contour of the nose was immediately restored. The grafted bone acted as a rafter, being firmly supported by the nasofrontal process, and it continued to exert a gradual traction on the soft tissues of the nose, which, having been unsupported, had subsided into two folds on either side of the nose. Within two weeks these folds had completely disappeared, the tissue having been drawn up into its proper place in the nose. The result in this case was practically perfect (Fig. 2).

In none of these patients did the temperature rise above normal, and none complained of much discomfort after the operation. The recovery of all was uneventful, primary union of the wound being obtained in each instance.

The vitality of the bone seems to have been affected in no way, and it is my belief that it has taken part in the process of repair, being nourished by an envelope of connective tissue forming practically a new periosteum. Certainly none of the transplanted bone has as yet been absorbed, and I see no reason why it should be, since the transplanted tissue is not a foreign body but is a living part of the same body into which it is replaced. Its molecular constitution is exactly the same as that of the tissues that surround it in its new position. Therefore it will continue to live, provided that its circulation is reestablished from the surrounding tissues; a sufficient time has elapsed to make us feel reasonably certain that this has already occurred in all three of my cases.

I believe that a large proportion of what have been considered hopeless cases of nasal deformity may be relieved by this method of treatment. Its superiority over all methods involving the introduction of foreign bodies into the tissues is self-evident.

69 West Fiftieth Street.

Black Plague in Newspaper Advertising.—It is encouraging to note from time to time in these columns the indications of an awakening conscience on the subject of truthful advertising. In an address at the one hundred and tenth dinner of the Sphinx Club, at the Waldorf-Astoria, New York City, James Schermerhorn, publisher of the Detroit (Mich.) *Times*, gave little comfort to newspaper men who sell advertising space to any one who has the price to pay for it. "It is a shabby trick," he said, "to capture the reader with editorials upholding the decencies of life only to deliver him over to the spoilers who lie in wait for him in the advertising section of the paper. There is a white plague, and philanthropists are fighting it. The publisher helps in his editorial and news columns. But in his business section there is a black plague, an inky infection in the form of spurious consumption remedies offering false hope to the hopeless; brazenly guaranteeing to cure the incurable. The awful cry of the despairing leper, 'Unclean! Unclean!' ought to be branded on the newspapers infected by the black plague. What of the publisher who entices his readers into wildcat investments by lifting the shell and showing the pea? Is he an opinion-holder or just a capper? The genuine brand of national righteousness should begin with the newspaper that advocates it. It is better to protect the reader every day against chicanery and betrayal than to use tainted money for the spectacular schemes for relief." Such public statements as these help to bring the day when there will be but one standard for right and wrong, and when there will be no privileged class that is permitted to lie and swindle with impunity.

POTASSIUM PERMANGANATE AS A HEMOSTATIC

L. BUCKLE, M.D.
NEW YORK

History.—A new-born baby boy, Jewish, weighed 9 pounds, had good color, nursed well and looked healthy up to the eighth day. No history of hemophilia. When the cord was tied and divided immediately after birth, there was no unusual bleeding and on the sixth day it came off.

Hemorrhage.—On the eighth day, about noon, the boy was circumcised and bandaged. Two or three hours later, the nurse noticed that the bandage and parts of the diaper were saturated with blood. She called me, and, finding the oozing very slight, I ordered gauze saturated with hydrogen dioxid to be applied to the bleeding surface. This I had found adequate to control hemorrhage in apparently similar cases. About 7 p. m., I was again called. The bleeding had not ceased, though the oozing was just as slight as before. I applied styptic cotton, adrenalin 1 to 1,000, powdered alum, tannic acid, and solution of silver nitrate, at different times, but without result. The family became so anxious and excited that they took the child to the hospital. There the skin was stitched to the mucous membrane above the glans, in the hope that this would help to check the bleeding; but it did not. In the two days the baby was in the hospital, it grew so pale and weak from the loss of blood that the father, not getting much assurance from the surgeons of its recovery, took it "to die at home," as he said.

Application of Potassium Permanganate.—On the fourth day after the circumcision I was called hurriedly. The baby was extremely pale and very feeble. It could not nurse from the breast but when some milk was pressed from the nipple into its mouth it slowly swallowed it. Temperature was subnormal; pulse and heart-beats were so weak and rapid that I could not count them. I again tried various styptics, but the result was as disappointing as before. I recalled that on several occasions of slight bleeding from small cuts, I used potassium permanganate with good results. I applied powdered potassium permanganate to the wound. The oozing immediately ceased and there was no recurrence of bleeding.

The action of the potassium permanganate in this case surprised me, and I mention it not with any enthusiastic conclusion, but merely that others may perhaps think of it in similar cases when the usual other agents fail to give good results. A deep cut on the forehead caused by a fall three months later healed without trouble.

321 East Tenth street.

UNUSUAL IDIOSYNCRASY TO ASPIRIN

G. BURTON GILBERT, M.D.
COLORADO SPRINGS, COLO.

The following case is reported because it seems unusual, and because of the violent reaction to an extremely small dose of aspirin. Judging from reports in the literature, poisoning from large doses of aspirin is relatively more frequent than that from small doses, which alone can show a distinct idiosyncrasy to the drug.

History.—On June 20, 1910, the patient, a woman aged 40, on complaining of slight frontal headache, was given, at 10 a. m., 5 grains of aspirin and $^1/_{60}$ grain strychnin sulphate, with instructions to take a similar amount of each at the end of one hour, if the headache persisted.

Symptoms of Poisoning.—Fifty minutes later I was called and found the patient very nervous, excited and frightened. She complained of feeling queer and dizzy. The headache was worse and pain in the inner corner of the right eye was intense. Both eyes were puffy and much swollen, especially under the lower lids. She complained of severe itching all over her head, which she scratched almost constantly. In about fifteen minutes the lips began to swell, reaching three times their normal thickness, and being tense and almost purple. This edematous condition also involved the upper portion of the throat. The voice became husky and breathing very difficult, the patient being unable to lie down. The finger-nails and ears were blue; the pulse was 110 and very irregular, while the temperature remained subnormal. The patient next complained of stiffness in the back of the neck and insisted that her throat was closing up. The itching extended over the ears and back, thence over the entire body, being accompanied by large blotches or wheals. Thus there was a generalized urticaria with a condition of the lips and throat resembling urticaria gigantea or angioneurotic edema.

Treatment and Result.—Cold compresses were applied to the lips, eyes and throat, and an ice bag was applied to the head. A hypodermic injection of ¼ grain of codein was followed in twenty minutes by another of 10 minims of epinephrin (adrenalin chlorid). Warm water containing a little salt was given until vomiting was induced at half past twelve. After this the patient felt somewhat better. She was given an injection of 1/60 grain of strychnin and a high enema. Within half an hour the swelling in lips, eyes and feet began to go down, the color improved and the breathing became easier. About 4 p. m., the patient fell asleep and slept for thirty minutes. By 6 p. m. the urticaria had disappeared except from the back of the neck and the only painful spot was in the right eye. On the following day the woman had entirely recovered except for considerable weakness and some aching in the back and legs.

The patient gave a history of having been poisoned on two other occasions; once from some spoiled sea food, when she was much sicker than anyone else in the party, and once from morphin which her physician had told her never to take again. She was also subject to chronic bronchial asthma. Therefore, the above may represent an asthmatic attack brought on, aggravated and complicated by an intense idiosyncrasy to aspirin.

817 North Cascade Avenue.

THE CAUSE OF THE IMMEDIATE PAIN AND ABSCESS FOLLOWING THE ADMINISTRATION OF SALVARSAN BY THE ALKALINE SOLUTION METHOD

B. C. CORBUS, M.D.
CHICAGO

The intravenous method of administering salvarsan will continue to hold its position as the most comfortable one for the patient, but whether or not it is as potent in the later stages of syphilis, time will have to tell. The trend seems to be toward some form of intramuscular injection.

As the alkaline solution method seems to be the most feasible and simplest in preparation and most far-reaching in its results in the later syphilids, it has been the aim of many observers to perfect it as far as possible. The two objections against this method have been the pain and lasting induration following the injection, the induration being followed at times by abscess formation. In all the reports published, such abscesses are sterile.

In my experience, covering 100 cases, I have found that the pain and induration are due to the sodium hydrate. The directions that accompany the tube of salvarsan advise that a 15 per cent. solution of sodium hydroxid be used in making the solution alkaline. One can readily see how easy it is to get an excess of sodium hydroxid; even one drop might cause an excess of alkalinity which would not only cause excess of pain, but in

an ill-nourished individual might cause considerable necrosis. Following the Alt-Lesser technic, I used a 4 per cent. solution (normal sodium hydroxid) and my success was good in regard to pain and induration. Only twice have I observed an abscess. In one case, the patient was extremely debilitated, and in the other I had to deal with an excessively fat individual. In each of these cases, I believe the abscess was the result of the sodium hydroxid.

I now use a 2 per cent. solution of sodium hydrate. In this way any excess of alkalinity is more easily avoided, the initial pain is lessened, and I find that uniformly the coagulum formed in the muscles is absorbed, leaving the muscles in a soft, pliable condition ready for a second injection whenever necessary.

I first put the 0.6 gm. of salvarsan in a 25 c.c. graduated cylinder, and dissolve it in 8 or 10 c.c. of hot water. The sodium hydroxid is then added in small quantities until a clear solution is obtained, care being taken not to add any sodium hydrate in excess. Hot water is then added in sufficient quantity to bring the total solution up to 20 c.c.; 10 c.c. of this solution are injected deeply into the buttocks on either side. Great care should be used to keep the injected fluid out of the adipose tissue. The sodium hydrate solution should be sterilized before each injection. This is also true of all the glassware used.

32 North State Street.

Modern Conditions Require Evolution in Personal Hygiene.—Dr. Irving Fisher, president of the American Health League, in an article in the New York *Christian Advocate*, says that the health movement means a revolution in the habits of living now prevalent in this and most civilized countries. It seems a radical statement, yet no observer can fail to see that it is already in process of realization. The "outdoor life" undoubtedly has come to stay, including even the growing custom of sleeping out of doors. Likewise, largely under the influence of Mr. Fletcher, and with the approval and aid of scientific and medical authorities, says Fisher, the art of eating is changing rapidly. When hard foods, thorough mastication, and lessened consumption of protein have become universal, we may expect to see less of the dentist or the stomach specialist. The invention of cooking and preparing foods has been a much mitigated benefit. While it has widened the variety of man's diet, it has led to the decay of his teeth. Many of the other inventions of civilization have their unhygienic side. The invention of houses has enabled mankind to dwell in all parts of the world, but it is responsible for tuberculosis, especially after glass was devised, which, while letting in the light, keeps out the air. The invention of the alphabet and printing has made possible the accumulation of knowledge, but it has produced eye-strain with all its attendant evils. The invention of chairs has added to human convenience, but has led to spinal curvature and abdominal congestion. The device of a division of labor has added to wealth, but has destroyed the normal balance of mental and physical work, recreation and rest. Similar fault may be found with clothing, especially corsets, shoes and hats, and with numerous other contrivances. Yet it would be foolish, even if it were possible, to attempt to "return to nature" in the sense of abolishing civilization. We must not go backward, but forward. The cure for eye-strain is not in disregarding the invention of reading, but in introducing the invention of glasses. The cure of tuberculosis is not in the destruction of houses, but in devices for ventilation. It is a little knowledge that is dangerous. Civilization can, with fuller knowledge, bring its own cure, and make the "kingdom of man" far larger, even in respect to hygienic conditions, than "nature" people can even dream of. Unhygienic customs and fashions are exceedingly slow to yield, but they do yield in the end. It should be the part of intelligent men to lead in hygienic reform, not by intolerant and impatient abuse, but by the quiet force of example

Therapeutics

CONSIDERATIONS IN THE MANAGEMENT OF PULMONARY TUBERCULOSIS

The earlier treatment is commenced in pulmonary tuberculosis, the better for the patient, and the greater the chances of an ultimate cure. This axiom indicates the importance of an early diagnosis of the presence of the disease. One of the benefits which has resulted from the recent agitation in regard to tuberculosis is the more frequent recognition of the disease at its beginning. Before the present general interest in tuberculosis, it was not uncommon for patients to go untreated until they had reached an advanced stage of the disease. Less often, but altogether too frequently, patients were under the care of a physician for months before the real nature of the trouble was recognized. So much has been said and written on this subject within the last fifteen or twenty years, that no physician is excusable for neglecting to recognize the nature of the disease as soon as he undertakes the treatment of the patient.

At this day, it is hardly necessary to enumerate the symptoms which would lead one to suspect the presence of the disease and to act on his suspicion by making a thorough investigation of the case, including a careful physical examination. Among these symptoms may be mentioned loss of strength, loss of appetite, loss of weight, loss of physical and mental energy, increased body temperature, increased rapidity of the heart, increased rapidity of the respiration, cough, especially when accompanied by vomiting, and hemoptysis. When any of these are present, if some other cause cannot be found, the presence of tuberculosis should be suspected, and the possibility of its existence should not be given up while the symptom exists, or until some other cause for it has been found.

As soon as it is definitely determined that the patient is suffering from pulmonary tuberculosis, several important questions arise and demand an early solution. In the first place, it must be determined whether the patient shall be treated at home, or shall be sent to a sanatorium in the neighborhood of his home, or shall be ordered a complete change of climate. Certain conditions may determine that the treatment shall be conducted for a time at least, in his own home. When the patient is found to be in an advanced stage of the disease, with a high temperature, rapid pulse, poor appetite, frequent cough, and copious expectoration, it is, in most cases, poor judgment, and cruel, to advise such a person to leave home and friends in order to have the very slight advantage which change of climate will afford him. On the other hand, it may happen, in rare instances, that even patients in the very worst condition improve, contrary to our expectations, hence if the patient manifests considerable powers of natural endurance, and is not likely to be unfavorably influenced by separation from his friends, he may be allowed, even if the symptoms are serious, to try a change of climate. But such cases are certainly rare. Many patients must be treated in their own homes because they cannot afford to leave their homes and be at the expense of traveling and paying board in a sanatorium or health resort.

If the patient while showing sufficient symptoms to enable the physician to make a positive diagnosis is at the same time not very weak, not suffering from much fever, and not coughing very much, it may be wise for

the physician to suggest a very radical move. Unquestionably, in some instances, it is the duty of the physician to advise the family, for the sake of the stricken member, to sever all relations with the community in which the disease has arisen, to sell their home if necessary, to dispose of their business if they have one, and to remove as a whole to a climate where the patient may recover from his disease, and to remain there permanently. This advice may be based on the now generally recognized fact that, if a person suffering from incipient tuberculosis goes to a climate where he recovers from the disease, he should continue to reside there, probably for the remainder of his life, certainly for many years. The converse of this is often true, viz., that patients who have recovered from tuberculosis in any particular climate, when they leave this climate and return to their former residence, often have a recurrence of the disease and go from bad to worse, or frequently develop pneumonia and die of that disease.

When a change of climate has been determined on, there is a wide range for choice in the selection of the particular climate, and it cannot always be determined in advance what climate will be best for the individual patient. Sometimes the patient's own experience of feeling better in summer or in winter will determine the selection for him of a mild or a cold climate. Often it will be found that patients who were born and have passed the early years of their life in a northern climate will do better, when making a change of climate, to select a cold climate. On the other hand, people who were born and raised in a warm climate, and who habitually feel better in summer, will usually do better in a warm climate, such as that of Florida or California.

Those who have a great tendency to have new foci in lung tissue break down, and those who have profuse bronchial discharge, and those who have fibroid phthisis, will generally do well in Arizona and New Mexico.

Some patients with pulmonary tuberculosis do well at the seashore, as has been observed to be the case with children suffering from bone and joint tuberculosis.

On the other hand, many do well in a mild climate, such as in the hills of the Carolinas.

Those who seem likely to do well in a cold climate, may be recommended to go to the Adirondacks or to Colorado.

Altitude is a thing that must be considered in selecting a climate for the tuberculous patient, and it will be found that those of nervous temperaments, with weak, rapidly acting hearts, those with high fever, and those with a tendency to hemoptysis, usually do not do well at a high altitude. On the other hand, those who are depressed by the heat of summer, but who are stimulated and feel stronger in winter, frequently do not do well in a low altitude like that of southern California or Florida. Whatever opinion may have been formed by the physician in advance, if his opinion is not confirmed by the experience of the patient, a change should be made to a climate of a different character.

It should never be forgotten that very sick patients do not stand travel and separation from their friends well, and that patients who find a climate in which they can live comfortably are foolish to leave it.

If the family of a patient is in moderate circumstances, and the patient is in an early stage of the disease, removal to a sanatorium in the neighborhood is frequently advisable. In the first place, this removes a focus of infection from the family and friends of the invalid. It also places him in a position of being instructed as to the proper care of himself. These are very important considerations. Further, his symptoms are daily, perhaps hourly, observed; he is required to do what is best for himself, and he is furnished with abundant and nutritious food. These are of great importance, and most patients at the beginning of the disease are benefited by them, even in the absence of any very marked change in climate. Much may be accomplished by treatment in such an institution as has been lately demonstrated, but it is perhaps too much to claim that such treatment is just as good as treatment in a more distinctly advantageous climate. Unquestionably certain climates are far better for certain tuberculous patients than others; and, unquestionably, for many, a considerable altitude is better.

Wherever the patient is treated, the matter of air is of first importance, as it is also in the preventive treatment of the disease. The patient should remain out-of-doors, if possible, during the whole twenty-four hours. Space forbids here a discussion of the various methods which may be adopted in order to secure this. Shacks, porches, balconies, and window tents may be utilized in appropriate cases. If it is entirely impracticable for the patient to sleep out-of-doors, or while suitable provisions are being made for this, he should at least sleep in a room with the windows open, and in a room to which sunshine has access during the day. At the same time that he is enjoying the benefit of this fresh air, often cold air, he must be adequately protected so that he will not suffer from the cold. He should wear woolen clothing, and be covered with light woolen blankets supplemented by adequate bed quilts and puffs. In cold weather, the head and ears must be protected from chilling, and also the patient must be kept comfortable; *he should be protected from draughts.*

In the advanced stages it is not wise to insist on absolute out-of-door treatment in the coldest weather, and often not even in milder weather. If the patient is weak, he may be treated with benefit within his usual sleeping room, if the windows are allowed to remain open, and the cold air warmed, but the room not allowed to become over-heated.

The question of rest is pre-eminent, and the importance of rest has been increasingly recognized by the medical profession during the last twenty-five years. If the patient has fever even of moderate degree, it will do him very little good in any case, and in most cases will do him positive injury to exercise or even to sit up out of bed. Exercise, even walking or sitting up, is now generally recognized as being almost as detrimental to the patient with tuberculosis as to a patient with typhoid fever. It is necessary to diminish oxidation and to conserve strength as much as possible, and this can only be satisfactorily accomplished by keeping the patient in bed, this to be continued as long, at least, as the temperature rises to 100 F. at any hour of the day, and probably as long as it rises above 99 F. While this is the rule, it is possible that in exceptional cases in which the temperature rises to 100, but not above, the patient may be benefited by brief exercise each day, but these instances are exceedingly rare, and this privilege should be granted only in chronic cases with low fever and not very rapid pulse. A weak and rapid pulse is also a strong indication for rest in bed.

Next in importance to rest and fresh air comes the question of diet. Many patients have been tormented and abused by overfeeding, which has been a fad at many tuberculosis sanatoria. It is now generally recognized by the best authorities on the treatment of pulmonary tuberculosis that overfeeding beyond the pro-

vision of an adequate physiologic supply of food is not wise. The character of the food administered should depend somewhat on the digestive power of the patient. If there is much fever and the digestion is weak, a strictly milk diet may be employed for a limited time. This may be supplemented, as the fever diminishes, and the digestive power increases, by broths and gruels. As improvement continues, eggs may be added. For a convalescent patient and the patient who has not much fever and a good digestion, an ordinary mixed diet (excluding indigestible and innutritious foods) including all easily digestible and nutritious foods, such as milk, eggs, fresh meats, stale bread, boiled rice, baked potatoes, fresh vegetables and fruit in season, will be found useful.

If the patient is very ill and has much fever, the rest in bed implies refraining from doing any business, from corresponding, from reading, or from seeing much company.

The fresh air, the rest, and the diet are the sheet anchors of treatment. Medicines are entirely subordinate to these hygienic measures, and yet, in many cases they are of great value.

Barrels of cod-liver oil have been consumed by patients, and not infrequently with considerable benefit, improving the nutrition and lessening the cough and expectoration. It should, perhaps, be regarded as a food rather than as a medicine, and as a food, unquestionably it will prove of value in many cases.

For many years, the hypophosphites, and especially the hypophosphite of calcium, and in some cases the hypophosphite of sodium, have been used with apparent benefit. Recent studies of the physiologic action of calcium on cell growth and nutrition may lead to a renewal of interest in the hypophosphite of calcium. The use of a combination of half a dozen different hypophosphites need only be mentioned to be condemned. There is no reason for the use of such a combination except the desire of a physician to order some one of the many proprietary hypophosphite combinations on the market.

So many unkind things have been said by such distinguished authorities about creosote, that one hesitates to mention it in connection with this subject, but if one feels impelled to administer an antiseptic drug in the treatment of this disease in which an efficient antiseptic would be so highly esteemed, he cannot do better than administer the carbonate of creosote. It will rarely injure the stomach, and it may promote digestion and nutrition by preventing gastric and intestinal fermentation, and may possibly, and many men believe that it does actually, have a favorable effect on the pulmonary pathologic process.

For the fever it is usually not necessary to give any drug, the light diet and the rest in bed in cool fresh air usually accomplishing the desired result.

If there is much cough, some simple codein expectorant mixture may be given. Such a mixture must not be sweet. The following are suggestions for treatment of the cough:

℞.	gm. or c.c.		
Codeinæ sulphatis	20		gr.iv
Ammonii chloridi	5		3iss
Syrupi ipecacuanhæ	5	or	fl.3iss
Syrupi acidi citrici.....	25		fl.℥i
Aquæ ..... ad	100	ad	fl.℥iv

M. et Sig.: A teaspoonful, in water, every two or three hours. Shake.

Or,

℞.	gm. or c.c.		
Codeinæ sulphatis	20		gr.iv
Ammonii chloridi	5		3iss
Syrupi acidi citrici	25	or	fl.℥i
Aquæ ..... ad	100	ad	fl.℥iv

M. et Sig.: A teaspoonful, in water, every two or three hours. Shake.

Or, if the cough is just a throat tickling, without much expectoration, the following is often efficient:

℞.	gm. or c.c.		
Codeinæ sulphatis	20		gr.iv
Alcoholis	10		fl.3iii
Spiritus chloroformi	5	or	fl.3iss
Syrupi tolutani	50		fl.℥ii
Aquæ ..... ad	100		fl.℥iv

M. et Sig.: A teaspoonful, in water, every three hours. Shake.

If there is profuse expectoration, a 5-grain tablet of terpin hydrate crushed by the teeth and taken with water four or five times in twenty-four hours is efficient in diminishing the amount of bronchial secretion.

Coughing that results in vomiting, or at least in retching is very likely to be due to either pharyngeal or lingual tonsil irritation and not to any trouble in the stomach. Gargling with some warm alkaline solution, as the *liquor antisepticus alkalinus*, diluted with equal part of warm water, or a Seiler's tablet solution, or gargling with one-fourth of a teaspoonful of salt and one-fourth of a teaspoonful of bicarbonate of soda to one-half a glass of warm water, will relieve and soothe the throat and stop this kind of irritation. Slippery elm and flaxseed tea are also valuable aids in stopping this lingual tonsil cough.

Codein is the best opium sedative to use. It does not dry up the secretions as does morphin, or interfere with digestion as does morphin, and is not as depressant as heroin.

The question of stimulants is one which often arises, and concerning which there is much discussion. In the advanced stages of the disease, where there is great prostration and no hope of recovery, alcoholic stimulants may be allowed on the ground that they increase the comfort of the patient and make him more reconciled to the wretchedness of his condition; otherwise, they should not be advised for habitual use. The various extracts of malt which contain a small percentage of alcohol are not to be included in this condemnation, and may often be administered with considerable benefit.

As has been urged before in these columns, unless a patient has become cured in a new climate and intends to remain there with new possibilities of occupation, he should, after recovery, return to the occupation to which he is accustomed, or to that which he left when he became ill, unless it is a peculiarly dangerous one for this disease.

Histologic Changes in Hodgkin's Disease.—F. Eve, in the *Practitioner*, states that the histologic changes in Hodgkin's disease are in the connective tissue framework and in the endothelial elements of the gland; and the diagnostic features are thickening of the stroma, with the presence of large multinucleated cells, and of cells rich in eosinophil granules; whereas in primary malignant disease a small round or lymphosarcoma is found, originating from the adenoid tissue, or a round or spindle-celled sarcoma arising from the stroma. Occasionally tuberculous glands present after removal the same pink homogeneous section as lymphadenomatous glands, and show no macroscopic evidence of caseation. Their nature can only be determined with the microscope.

XUM

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THE LOST ARTS

We are sometimes made to feel humble in the midst of our triumphal march of progress, by being told that in the ancient civilizations men did many things better than we do them now, and that at the best we ought to recognize that what we consider discoveries are mostly but rediscoveries. Probably we need this sort of corrective to self-satisfaction; nevertheless, it seems likely that modern iconoclasts will destroy its efficiency. "The lost arts" is a catch-word by which we set great store, and according to Dr. W. D. Richardson[1] its popularity in this country rests largely on the prominence given it by Wendell Phillips in his lecture on this topic, which he repeated two thousand times, more or less, in lyceum courses all over the country. Dr. Richardson examines the evidence on which rest the claims of unusual chemical achievements by the ancients, and finds it worthless.

The ceramic arts, it is true, did yield products at certain times which were not duplicated later, but it was not the art but the materials which were lost, for the results obtained by the potter depend in large measure on the particular clays he has to work with, and when a certain supply of clay gave out, a particular form of pottery might be discontinued. Fabulous tales of glass, with unequaled beauty and unbelievable ductility and malleability, are of wide popularity. To be sure, the ancients did make a sort of glass, opaque or translucent, often possessed of great beauty from the standpoint of the fine arts; but when it became possible to make a good transparent product the imperfect if more beautiful form lost its market and ceased to be made. Recently the interest in objects of art made of opaque and translucent glass has revived, and this glass is again being manufactured, but the art of making it was never entirely lost. So, too, the stories of marvelous cements, plasters, dyes and pigments, vastly superior to anything now available, are found on examination to possess no truth.

We must always remember that only the best examples of the materials used by the ancients can now exist; it is not at all fair to judge their entire work by these exceptional specimens. As we have pointed out in these columns before,[2] the reputed lost art of embalming, as performed by the ancient Egyptians, was nothing more marvelous than simple pickling in a brine of common salt; its wonderful efficiency was contributed by the dry climate in which the bodies were left. The oft-repeated statement that the same people filled carious teeth with gold according to the most modern practice, is also a myth. The building of the pyramids involved no preternatural knowledge of mechanics, but simply the inhuman use of myriads of slaves. Some arts, of course, depend on dexterity and manual skill, best transmitted by the personal training imparted by one artisan to another, rather than on scientific principles. If, therefore, the demand for the objects so produced becomes lessened, as by war, social disturbances, or change of customs, the arts may be forgotten. Real science, however, does not go backward, and to such extent as arts depend on science rather than on exceptional personalities, or on the continued maintenance of a high level of dexterity and skill, they cannot well be lost.

1. An address delivered before the American Chemical Society, Dec. 28, 1910, Science, April 7, 1911.

ANTIPLAGUE MEASURES

We have referred previously[1] to the outbreak of plague in Manchuria, which promised to be unusually severe and extended, and the death-rate of which was extremely high. On account of the appalling nature of the outbreak, the Chinese government was led to call for international assistance with a view to gaining control over the disease. Scientific studies of plague in a latitude so far north and under the conditions of life to be found there should be productive, and there should be elicited new facts regarding the epidemiology, especially of the pneumonic form of the disease.

Recent official reports and press dispatches indicate the marked diminution in the severity of the outbreak in North China, especially in those centers in which it first appeared. On account of the extension from those centers, however, new foci have been established, and it is safe to say that a wide territory is now affected, thus rendering more difficult the precautionary measures as to sanitation that have been inaugurated.

Notwithstanding the limited trade relations with ports in Manchuria and North China, some apprehension arose as to the possible dangers to our ports from such a severe epidemic, but the precautions taken in Manchuria itself by the Chinese government and other governmental agencies, and by railway officials and others interested, were undoubtedly a great protection to international shipping and particularly because the disease was of the pneumonic type. Besides, there is reliable authority for the belief that there was no infection of the rat population, which, when infected, constitutes the greatest danger to international commerce.

2. May 16, 1908, p. 1610; April 15, 1911, p. 1110.
1. Feb. 11, 1911, p. 45.

Additional precautions were also afforded through sanitary supervision of passenger and freight traffic by medical officers of the Public Health and Marine-Hospital Service stationed at the principal ports of China and Japan. The quarantine system of the Japanese government, on account of the location of that country in the line of transpacific ships from China to the United States, also serves as a barrier to the extension of epidemic diseases. With these precautions abroad, and the careful supervision maintained over arriving ships, their passengers and cargoes, as well as a campaign for the extermination of rats on all vessels at home ports, required under the national quarantine regulations, there appears to be no likelihood of the introduction of the infection of plague as a result of the recent outbreak referred to.

The question arises as to the measures taken to prevent the spread of the infection that has been shown to exist on the Pacific coast. The last outbreak in California began Aug. 12, 1907, from which date to Jan. 30, 1908, there occurred in San Francisco 159 cases with seventy-seven deaths.

Were it not for the fact that the infection had secured a hold among ground-squirrels, all probability of further cases would have ceased, since the disease was eradicated from San Francisco and other bay cities. Those cities are now protected, however, by a squirrel-free zone established and maintained by the sanitary authorities interested.

The first infection among squirrels was found in August, 1908, which indicated that these rodents might serve as a potential agency in fostering the infection, and emphasized the necessity of a systematic and vigorous campaign for their extermination. According to the weekly Public Health Reports, this work has been carried on with the view to the destruction of known foci of infection, determination of the extent of the area of infection and general squirrel extermination.[2]

That the plague-suppression measures have been extensive is shown by the fact that since July 1, 1908, they have cost the federal government approximately $800,000, and the State of California not less than $500,000. Until March 4, 1911, there had been collected 992,247 rodents, 937 of which were found to be infected. Squirrels have been collected over a considerable area of the State of California, and the area of infection appears to be definitely determined. In addition to the maintenance of the squirrel-free zone mentioned, the work carried on includes the destruction of known foci of infection, and the work of squirrel extermination is becoming general, being actively carried on in ten counties.

While the work is being conducted by an officer of the Public Health and Marine-Hospital Service in cooperation with state and local health authorities, much is being done by ranch-owners and farmers, and county authorities are aiding extensively by the appropriation of money and the employment of inspectors.

From the character and extent of the work done and the plans for its continuance, the plague situation on the Pacific coast should cease to be a menace; but the problem of squirrel extermination is a large one, and there is necessity of a clear understanding on the part of the public, not only of the difficulties involved, but of the strenuous measures that have been taken. Those having charge of this work not only should be provided with ample funds, but should also be supported by an enlightened public opinion.

2. Public Health Reports, April 21, 1911.

EXPERIMENTAL TUBERCULOUS REINFECTION AND ITS BEARING ON HUMAN TUBERCULOSIS

In a series of experiments, Römer and Joseph[1] show that in guinea-pigs and sheep a preexisting tuberculosis protects wholly or in part against a later experimental infection. The procedure in general is briefly as follows: An emulsion of tubercle bacilli in physiologic salt solution is penciled over a short incision in the skin of guinea-pigs which some time previously have been infected with tubercle bacilli subcutaneously. Guinea-pigs which were healthy, except so far as the incision and its treatment were concerned, served as controls. Various experiments like this modified in different ways gave the same results. The previously tuberculous pigs were completely immune to cutaneous reinfection, and the wounds made in the skin for the purpose of reinfection healed promptly, whereas the control animals died from disseminated tuberculosis. Guinea-pigs were also immune to reinfection when the bacilli used in the experiments were obtained directly from the organs of tuberculous animals. Experiments on sheep gave the same results as those on guinea-pigs, the reinfected sheep being wholly immune to quantities of bacilli which in control animals caused death from wide-spread pulmonary tuberculosis in the course of eight weeks.

Now it is generally assumed and believed that in man the resistance to tuberculosis increases with age. The young are especially prone to tuberculous infection, only too often of a progressive type running a rapid course. It is usually said that in the very young there exists a physiologic state or "disposition" which renders them more susceptible to infection and less resistant than adults. This predisposition is regarded as specially marked in the children of tuberculous parents. Such children are exposed very freely to infection because of the close contact in which they are placed with those about them and this may explain in part at any rate the apparent increased susceptibility. It may be noted that experiments with the young of tuberculous animals do not appear to indicate that there is any special susceptibility to tuberculosis in them. The large percentage of positive tuberculin reactions in children points unmistakably in the direction indicated, namely, the ease with

1. Römer and Joseph: Beitr. z. Klin. d. Tuberk., 1910, xviii, 281.

which infection occurs early in life. Indeed, it seems not improbable that, at least in the large cities, almost every person is infected with tuberculosis by the time he reaches puberty. Hence it lies near at hand to conclude that the increasing resistance to tuberculosis as age advances may be largely the result of infection with tubercle bacilli early in life.

In the struggle now waged everywhere against tuberculosis the efforts are not always directed toward the point where most effective progress might be achieved. Thus, it should always be borne in mind that in the adult the susceptibility is relatively less than in the young. It is the child that we should aim to protect by all means and especially against the most dangerous sources of infection, namely, the constant association with the tuberculous.

Current Comment

PUBLIC HEALTH PERSONNEL BILLS

Two bills,[1] S. 1182 and H. R. 5599, which deserve the cordial support of those interested in increasing the efficiency of the federal health agencies, have been recently introduced into Congress, one by Senator Owen and one by Representative Charles G. Edwards. These measures relate entirely to the personnel of the Public Health and Marine-Hospital Service and are designed to make that service more attractive to young medical men. While varying in phraseology, the bills have in view the same object—increase in pay. For over a century there have been three national medical services—the Army, the Navy and the Public Health and Marine-Hospital Service—and the requirements for admission to all have been equally exacting. In 1871, the Marine-Hospital Service was organized on its present basis and the appointments and promotions therein were placed on the merit system. In 1889, the pay of its officers was placed on a parity with that of the other medical corps, but in 1908, when the pay of the Army and the Navy medical corps was materially increased, that of the Public Health and Marine-Hospital Service was not similarly raised. The annual salary of a physician entering the Navy at the present, for example, is within $45 of that of one who has been in the Public Health and Marine-Hospital Service for fourteen years. As a result, it is difficult to retain the best men in the service and almost impossible to recruit its ranks with men of proper qualifications. The present bills are designed to overcome these difficulties by more nearly equalizing the pay of the three services. The officers of the Army and Navy receive certain allowances and perquisites which are not contemplated for those of the public health service, so that on the whole the pay of the former would continue somewhat higher. The proposed increased pay in the public health service, however, would doubtless attract a class of young physicians who prefer a civilian to a military career. Within the last few years Congress has repeatedly recognized the justice and necessity of such legislation as is now proposed; in fact every provision of the Edwards bill has at one time or another passed either the Senate or the House of Representatives, but the question of pay, unfortunately, has become so involved in questions of function that bills passing one house have not been acceptable to the other. Thus some members of Congress have opposed all bills for increased pay which did not impose additional duties, while others have not favored bills providing for increased function on the ground that their passage would imperil the chances for a federal department of health. It is to be hoped that this question will be considered solely on its merits, as all interested in public health work, in or out of Congress, agree as to the need and justice of increasing the pay of the officers of the public health service.

1. Reprinted in Miscellany Department, this issue, page 1279.

OPIUM-CONTAINING PROPRIETARIES

In the "Propaganda for Reform" department of this issue, appears a report of the Council on Pharmacy and Chemistry on a proprietary product called Pantopon and a contribution from the chemical laboratory on another proprietary—Papine. While both are opium preparations—that is, owe their chief or entire activity to morphin—there the resemblance ceases. Papine, according to our chemists, is merely a solution of morphin. The manufacturer, a typical St. Louis proprietary firm, claims for this preparation the impossible, namely, that it contains morphin minus morphin's harmful properties; and the unthinking physician is thus led to prescribe morphin recklessly and without due consideration of its dangers. Pantopon, on the other hand, is made by a firm whose products, in a number of cases, have been accepted by the Council for inclusion with New and Nonofficial Remedies. The composition of Pantopon is not secret, for it is definitely stated that it consists of the alkaloids which naturally occur in opium, freed from the other constituents of opium—extractive matter, etc.—in the form of hydrochlorids. Papine and Pantopon, however, resemble each other in that they have names which do not sufficiently indicate to the physician their chief constituent, morphin, and they are, therefore, a menace to the public. In spite of the testimonials for both these products, we believe that physicians would not be far amiss if they would continue to use the drugs, morphin and opium, whose value—and dangers—they know.

SELF-SUPPORTING CRIPPLES

The compensation of workmen in factories and other industries for injuries sustained in the line of their work is a live question at the present time. Many European countries for years have had laws concerning employers' liability and workmen's compensation. A step further in this humanitarian line is the education of persons prevented from following their former occupation or trade by reason of injury. This is accomplished by the establishment of schools wherein such persons are taught various trades by which they may earn a livelihood, even in their crippled condition. At Charleroi, France, at the instigation of Pastur and Caty,[1] a school has been established for this purpose. Among the trades taught

1. Presse Médicale, Feb. 18, 1911.

to people injured in the industrial establishments of this manufacturing city are brush-making, the making of paper boxes, turning, binding, stenography and typewriting, drawing and other forms of manual training. The trade which the crippled individual must take up is, of course, governed in a measure by the nature of the injury; for instance, individuals crippled in the legs would follow occupations allowing them to sit at their work. In one case described in the article referred to, a man with both arms amputated near the shoulder, by means of a mechanical appliance about his neck, follows the trade of a wood-turner. In another instance, an individual with both hands gone was enabled to make brushes. The many occupations which may be followed by the blind are more or less familiar. Similar schools are conducted in other places, at present mostly through private philanthropy. There is no reason why such schools should not be supported by the state; this undoubtedly will be a development of the future, following the securing of efficient employers' liability and workmen's compensation acts.

UNIVERSITIES AS OBJECT-LESSONS IN HYGIENE

"Preventive medicine is the cheapest life-insurance which can be taken out." With this sentence Ravenel and Frost of the hygienic committee of the University of Wisconsin conclude an admirable paper in this issue on "The Formation and Functions of Hygienic Committees for Universities," which gives a history of the formation of the committee on hygiene of the university and its achievements. The need for such a committee in this instance is abundantly shown. Conditions in the University of Wisconsin are probably representative of conditions to be found in many other universities and in smaller schools as well. The worth of the paper lies not so much in the statement of the good accomplished in this one school, as in the admirable scheme of investigation employed and the measures adopted for bettering the hygienic conditions of the buildings and health of the students, which may serve as a model. Their studies have brought them to the following conclusion: "Schools, colleges and universities ought to lead in sanitary construction, sanitary equipment and sanitary care. Class-rooms and laboratories ought to be models of sanitary excellence as well as of convenience and attractiveness. The educational value of such buildings far outweighs any additional expense involved." It might be added that the lessons of this paper would apply with still greater force to industrial establishments employing large numbers of men and women, with longer hours and more exacting conditions than in the schools; and the sentence first quoted might be changed to read, "Preventive medicine is the cheapest industrial insurance which can be taken out."

THE SCOPE OF THE NEXT PHARMACOPEIA

Although the Committee on Revision of the United States Pharmacopeia was appointed nearly a year ago, it has issued no report to show what progress is being made. While there are doubtless good reasons why no such report has been published, the committee should realize that the medical profession is interested as never before in the question of what should be added to, or deleted from, the next edition of the Pharmacopeia. It may not be amiss to point out that physicians frequently accept at their face value claims made by interested persons regarding the therapeutic action of certain drugs. This applies to both proprietary and non-proprietary articles. There is a tendency on the part of certain doctors to prescribe such drugs, even after they have been shown to be worthless, especially if the preparations have been admitted to the official standards and consequently included in text-books. An example of the official recognition — not pharmacopeial — of a valueless preparation is that mixture of pepsin and pancreatin known as Elixir Digestivum Compositum, N.F. A formula for this preparation was put in the National Formulary because of the very extensive use of a nostrum widely exploited with most extravagant and untruthful claims. This nostrum has been and is widely used, not because it is of any therapeutic value, but simply and solely because it has been extensively and extravagantly advertised. It is well known that liquid preparations of pepsin and pancreatin are therapeutic absurdities and chemical impossibilities. So, while a drug may be widely used, it does not necessarily follow that it is of any value whatever. Many text-books contain recommendations for the use of drugs simply because some other text-book recommended them, not because they are of any value. It is to be hoped that those who select the articles to be included in the next Pharmacopeia will have some other basis for inclusion than the mere fact that they are being used. If the Pharmacopeia is to be a scientific treatise on drugs, and is to enlist and keep the respect of the medical profession, the adoption of some other standard becomes inevitable.

Medical News

ALABAMA

Tag Day in Montgomery.—The Young Ladies' Auxiliary of the Montgomery Antituberculosis League will hold a Tag Day, April 29, the proceeds to be devoted to the purchase of a site for a day camp for tuberculous patients.

Antituberculosis Society Election.—At the annual meeting of Jefferson County Antituberculosis Association, held in Birmingham, April 16, Dr. Benjamin L. Wyman was elected first vice-president, and Drs. Cabot Lull and Cunningham Wilson were elected directors. By the efforts of the association, a tuberculosis camp has been established on Red Mountain. The most recent addition to the camp is a dining room pavilion just completed which will accommodate seventy-five patients.

Personal.—Dr. James T. Fowler, Dothan, has succeeded Dr. Edgar R. Burns, Sheffield, as medical member of the State Convict Board.——Dr. George I. DeWald, state bacteriologist, has resigned and will resume practice at his home in Philadelphia.——Dr. Jackson T. Brown, Riverside, has been appointed road commissioner of St. Clair County.——The residence of Dr. James T. Searcy on the State Hospital grounds, Tuscaloosa, was destroyed by fire, March 5.

ARKANSAS

State Society Meeting.—The annual meeting of the Arkansas Medical Society will be held in Fort Smith, May 9-12, under the auspices of the Sebastian County Medical Society.

Sanitarium Established.—A number of physicians of Missouri and Kansas have united in the organization of a sanitarium company at Sulphur Springs. The building is a five-story, stone structure containing 100 rooms with modern

equipment; is situated in a well kept park of 40 acres, which contains also an 8-acre lake and five mineral springs. Dr. J. Morse Griffin is president of the company, and Dr. Edward R. Tenney, medical superintendent.

Needs of the Sanatorium.—After meeting with the board of trustees of the State Tuberculosis Sanatorium, the joint committee of the legislature has decided to ask for an appropriation of $25,000 for construction work, and of $60,000 for maintenance of the institution for two years. The sanatorium at present accommodates seventy patients, but with the infirmary and additional quarters proposed, the capacity will be increased to 100. The cost of maintenance is estimated at $600 per annum per patient.——A bill has passed the senate appropriating $85,000 for a state tuberculosis sanatorium and the bill is at present pending in the house with fair prospects of passage.

CALIFORNIA

Personal.—Dr. Addison Morgan, San Diego, has been appointed autopsy physician to the coroner of San Diego County. ——Dr. Annette Buckel, Piedmont, was the guest of honor at a banquet of the Professional Women's League, Oakland, March 21.

State Society Meeting.—At the annual meeting of the Medical Society of the State of California, held in Santa Barbara, April 18 and 19, Del Monte was chosen as place of meeting in 1912. The following officers were elected: Dr. Thomas W. Huntington, San Francisco, president; Drs. Charles S. Stoddard, Santa Barbara, and John R. Walker, Fresno, vice-presidents; and Dr. Philip Mills Jones, San Francisco, secretary-treasurer (reelected).

COLORADO

Ball for Nurses.—The first annual ball of the Denver Visiting Nurses' Association was given April 18, and netted for the association about $1,000.

Hospitals in State.—The last report of the State Board of Charities and Corrections states that there are eighty-two hospitals in Colorado, of which twenty-two are private or semi-private institutions for the care of tuberculous patients.

Personal.—Dr. Mary E. Phelps, Canon City, has returned after a year abroad.——Dr. William C. Mitchell, Denver, has gone to Europe.——Dr. Richard S. Grant, Colorado Springs, was painfully injured in a runaway accident, April 4.—— Dr. Peter H. Heller, Pueblo, who has been ill in St. Mary's Hospital, has recovered and resumed work

Dispensary Will Build.—The Free Medical Dispensary, established six months ago under the direction of the North Denver Italian Mission, has been so successful that plans are now being made for the erection of a building to cost $20,000. About $7,000 of this amount has already been subscribed. The dispensary has treated so far more than 400 cases a month.

Consumptive Relief Society.—The Jewish Consumptive Relief Society, Edgewater, celebrated its seventh annual meeting, April 16, and laid the cornerstone of the second New York Ladies' Auxiliary Pavilion and the cornerstone of the Beth Jacob Synagogue, the gift of I. Solomon, Denver, in memory of his son. During the last year the society has spent $65,000 and now has a balance of $10,000 in the treasury.

DELAWARE

Wilmington Appoints Vaccine Physicians.—The city council has reelected the following vaccine physicians: Drs. John McGrath, Harry G. Buckmaster, Wilbur E. Postles and Harvey B. Patton.

Quarantined Immigrants Revolt.—About 200 immigrants, detained fourteen days in quarantine in Lewes because of an outbreak of small-pox on the steamship *Verona*, became vexed at the non-arrival of the steamship *Taormina*, which was expected to arrive April 14 and take them to Philadelphia, overpowered the few guards and marched to the Lewes railway station. They were refused tickets and were driven back to quarantine by armed guards, assisted by sailors from the United States Revenue Cutter *Onondaga*.

GEORGIA

Personal.—Drs. Josephus J. P. Bowdoin, Adairsville; Fred V. Turk, Stilesboro, and George Will Battle, Cassville, have been appointed members of the board of health of Bartow County. ——Dr. Philip H. Camas has been appointed medical inspector of the high school of Baxley.

Health Boards Organize.—The Association of State, County and Municipal Health Boards was organized at Rome, April 18, at a meeting of the Georgia Medical Association and the State Board of Health. Dr. James C. Bloomfield, Athens, was elected president; Dr. Olin H. Weaver, Macon, vice-president, and A. V. Wood, Brunswick, secretary.

State Society Meeting.—The Medical Association of Georgia held its annual meeting at Rome, April 19-21, under the presidency of Dr. Edward C. Davis, Atlanta. Augusta was selected as the next place of meeting, and the following officers were elected: president, Dr. William L. Fitts, Carrollton; vice-presidents, Drs. Robert M. Harbin, Rome, and T. E. Bradley, Cordele; secretary-treasurer, Dr. William C. Lyle, Augusta; delegate to the American Medical Association, Dr. William Doughty, Augusta, and alternate, Dr. Edgar G. Ballenger, Atlanta.

ILLINOIS

Asks New Hospital.—Several practitioners of Aurora have started a petition to Bishop Muldoon requesting that the Sisters of Mercy be allowed to erect a hospital on the west side, as the hospitals in Aurora and St. Charles are already overcrowded.

County Society Room Planned.—At a recent meeting of the Montgomery County Medical Society, it was proposed to have a room built on the east side of the Litchfield Hospital 20 by 26 feet to be used as a meeting place and clinic room for the society. The cost of the proposed addition is $2,000.

State Society Meeting.—The Illinois State Medical Society will hold its annual convention in Aurora, May 16-18. Dr. Herman A. Brennecke, chairman of the committee on accommodations, appreciates that accommodations at the hotels will be inadequate and is making early arrangements for accommodations in private houses. Those desiring accommodation should communicate with Dr. Brennecke.

Personal.—Dr. and Mrs. William M. Kauffman, Princeton, have returned after a winter spent in Florida and the east.——Dr. William L. Gray has been elected president of the board of education of Champaign.——The office of Dr. James E. D. Silcox, Rio, was destroyed by fire, April 9, with a loss of $2,000, partially covered by insurance.——Dr. Edwin L. Winslow, Danville, has been reelected physician of Vermilion County.

Society Meetings.—At the meeting of Greene County Medical Society, held in Kane, March 10, resolutions were adopted respectfully requesting the legislature and governor to adopt such laws as will give to the state only high class medical schools, and also asking the legislature and governor to establish and maintain one educational standard and one medical examination, except in therapeutics, for all who are licensed to treat human disease, and endorsing the work done, and the standard of medical education adopted by the Council on Medical Education of the American Medical Association. Dr. Henry A. Chapin, White Hall, was elected delegate, and Dr. Henry W. Chapman, White Hall, alternate delegate to the state medical society.——At the annual meeting of the McLean County Medical Society, held in Bloomington, April 6, the following officers were elected: president, Dr. Robert A. Noble. Bloomington; vice-president, Dr. Ferd. C. McCormick, Normal; secretary-treasurer, Dr. Thomas D. Cantrell, Bloomington; censors, Drs. Edward L. Brown, John W. Dobson and Ralph D. Fox, all of Bloomington; delegate to the state society, Dr. Edwin P. Sloan, and alternate, Dr. Ernest B. Mammen, both of Bloomington.——At the annual meeting of Waukegan Physicians' Club, April 4, Dr. Fremont C. Knight was reelected president; Dr. William C. Bouton, vice-president, and Dr. Charles E. Daniels, secretary-treasurer.

Chicago

Bequest for Hospital.—The county judge at Kenosha has admitted to probate the will of the late Caroline Durkee, which devises the entire estate to St. Luke's Hospital, Chicago, and Racine College, Racine, Wis.

Personal.—Major Daniel W. Rogers, M. C., Ill., N. G., chief sanitary officer of the state, has been detailed for temporary duty at the maneuvers on the Mexican frontier.——Dr. and Mrs. Maurice L. Blatt sailed for Europe, April 27.

INDIANA

Health Officers to Meet.—Dr. John N. Hurty, Indianapolis, secretary of the State Board of Health, has issued summonses to all the county health commissioners in the state to attend the annual conference to be held at the Claypool Hotel, Indianapolis, May 9 and 10.

District Society Meeting.—The annual meeting of the Twelfth District Medical Society was held in Fort Wayne, April 12, and the following officers were elected: Dr. William F. Shumaker, Butler, president; Drs. Benjamin P. Weaver, Fort Wayne, and Lyman T. Rawles, Huntertown, vice-presidents; and Dr. Homer E. Glock, Fort Wayne, secretary-treasurer.

Personal.—Dr. Joseph Kentling, Smithville, while crossing the Monon tracks, was struck by a train but only slightly injured.——Dr. Philip E. Stockhardt, Elwood, has been adjudged of unsound mind and committed to the Eastern State Hospital, Richmond.——Dr. Lewis C. Griffith, Bowling Green, has been appointed health officer of Washington Township, vice Dr. T. Roy Cook, Bowling Green.——Dr. and Mrs. Thomas J. Bowles, Muncie, celebrated their golden wedding anniversary, April 14.

MARYLAND

Hospital Made Residuary Legatee.—By the will of the late Benjamin F. Chambers of Trenton, N. J., formerly of Cecil County, Union Hospital of Cecil County, Elkton, is made the residuary legatee and will receive about $60,000.

Decide on Jarrett Portrait.—At a meeting of the Baltimore County Medical Association, held in Towson, April 19, it was decided to have a portrait painted of Dr. James H. Jarrett, Towson, who graduated fifty-nine years ago, the portrait to be deposited with the Medical and Chirurgical Faculty of Maryland in Baltimore.

Annual Meeting of Society.—At the annual meeting of the Montgomery County Medical Society, April 20, the following officers were elected: President, Dr. James Dudley Morgan, Chevy Chase; vice-president, Dr. Frederick N. Henderson, Rockville; secretary-treasurer, Dr. John L. Lewis, Bethesda; censors, Drs. William T. Pratt, Potomac; Clayborne H. Mannar, Rockville; Vernon H. Dyson, Laytonsville, and delegate to the Medical and Chirurgical Faculty of Maryland, Dr. James E. Deets, Clarksburg.

State Sanatorium Report.—The fourth annual report of the Maryland Tuberculosis Sanatorium, founded in 1906, and located on the crest of the Blue Ridge Mountains, sixty-nine miles northwest of Baltimore, and established at a cost of $265,000, for white citizens in the incipient stage of tuberculosis, shows that during the year 574 patients ranging from seven to seventy-two years of age, were treated, the daily cost per capita being 95.3 cents. The beds were filled at all times, and there was a waiting list of from four to fifty. More than 500 patients have had to be refused annually. During the year 371 were discharged, 17 or 4.6 per cent. apparently cured; in 142 or 38.3 per cent., the progress of the disease was arrested; in 153 or 41.2 per cent. the condition of the patient improved; in 54 cases or 14.6 per cent., the condition of the patient remained unimproved; and 5 patients or 1.3 per cent. died. Of the patients, 102 remained less than ninety days, and 269 for a longer period. The after results in the case of 618 patients discharged since the opening of the institution in August, 1908, show that 36 are well, 271 are living and working; 173 are living and not working; 106 have died and the condition of 32 is unknown.

Baltimore

Personal.—Dr. Samuel C. Chew is suffering from a severe attack of influenza.——Dr. Jacob D. Norris, president of the board of police examiners, is seriously ill with heart disease.——Dr. Mary Sherwood has been elected president and Dr. Florence R. Sabin, corresponding secretary of the Just Government League.

Home for Physicians' Widows and Orphans.—At the second annual meeting of the board of managers of the Home for Widows and Orphans of Physicians, held April 18, the following officers were elected: president, Mrs. Eugene F. Cordell; vice-president, Mrs. Sophia Cooke Waters; recording secretary, Mrs. Augusta E. Fenton; corresponding secretary, Mrs. John G. Jeffers, and treasurer, Dr. Eugene F. Cordell.

MICHIGAN

Personal.—Dr. David J. Levy, Kalamazoo, has returned from Vienna.——Dr. Arthur R. Hayton, Shelby, suffered severe injuries of the face by an explosion of chemicals in his office recently.——Dr. Collins H. Johnston, Grand Rapids, has sailed for Europe.

State Board Nominations.—The governor sent the following nominations to the state senate, April 19, for places on the State Board of Registration in Medicine: Dr. Henry C. Maynard, Hartford, to succeed himself; Dr. Arthur M. Hume, Owosso, to succeed Dr. Flemming Carrow, Detroit; Dr. Bret Nottingham, Lansing, to succeed himself; Dr. Joseph A. Crowell, Iron Mountain, to succeed Dr. Theodore A. Felch, Ishpeming; and Dr. Austin W. Alvord, Battle Creek, to succeed himself.——Prof. Robert L. Dixon, Ann Arbor, has been nominated by the governor to succeed Dr. Frank W. Shumway, Lansing, as secretary of the State Board of Health.

Antituberculosis Work.—At the annual meeting of the Kalamazoo Antituberculosis Society, March 29, Dr. Herman Ostrander was elected president; Dr. John B. Jackson, secretary; and Dr. S. Rudolph Light, treasurer.——The Detroit Tuberculosis Sanatorium has received an anonymous gift of $5,000, which will provide for the perpetual endowment of one bed in the institution.——The Saginaw Antituberculosis Association has filed articles of incorporation.——Morgan Heights Sanatorium, the Marquette County Tuberculosis Hospital, situated about 7 miles west of Marquette on a high plateau, is practically completed and will be ready to receive patients in a few days.

Certified Milk Bill Passed.—After two years' effort, opposed by money dairymen who were selling milk which was not certified but which was claimed to be certified, the legislature has just passed a bill limiting the term certified milk to the high standard required by the committee appointed by the State Medical Society. This committee is composed of Drs. Collins H. Johnston, Grand Rapids; Marinus L. Holm, state bacteriologist, Lansing; Blanche N. Epler, Kalamazoo; Christopher G. Parnall, Jackson, and Thomas B. Cooley, Detroit. The bill was practically the same as the New Jersey law, except as to the method of selecting the commissioners who are now to be appointed by the local health boards if they have two physicians as members, otherwise by the state board. The bill "provides for the appointment and incorporation of medical milk commissions and the certification of milk produced under their supervision," and details the requirements.

MISSISSIPPI

Health Exhibit Campaign.—Dr. Waller S. Leathers, University, director of the public health and sanitation campaign of the State Board of Health, has received a letter from the Queen and Crescent System offering the board the use of two cars for the use of the health exhibit campaign throughout the state. Plans for the trip of the cars through Mississippi are now being formulated.

State Medical Society Meeting.—The annual meeting of the Mississippi State Medical Association was held in Jackson, April 11-13, under the presidency of Dr. John W. Young, Grenada, and the following officers were elected: president, Dr. Daniel J. Williams, Ellisville; vice-presidents, Drs. John T. Longino, Jonestown; Samuel E. Eason, New Albany, and John C. McNair, Fayette; secretary, Ewing F. Howard, Vicksburg; treasurer, Dr. Levi B. Sparkman, Cleveland; councilors, Drs. Sydney W. Johnston, Vicksburg; Charles M. Coker, Eden, and G. W. Wallace, Arbo. The association nominated the following five members as members of the State Board of Health to be appointed by the governor in 1912: Drs. John Darrington, Yazoo City; Giles S. Bryan, Amory; Elbert A. Cheek, Arcola; Theophilus E. Ross, Hattiesburg, and Inman W. Cooper, Newton. All of the nominees are members of the present state board.

NEW YORK

Personal.—Dr. Montgomery E. Leary has resigned as director of the Rochester Public Health Association after thirteen years' service. Dr. Leary will hereafter give his entire attention to his duties as superintendent of the Iola Sanitarium.——Dr. David H. MacKenzie, Millbrook, is reported to be seriously ill with disease of the gall-bladder in Sadlier Hospital, Poughkeepsie.

Hospital Gifts for Troy.—The Board of Directors of the Samaritan Hospital has received an offer from Miss Alida Van Schoonhoven of that city to erect and equip a memorial hospital.——George B. and Robert Cluett have also offered to erect and equip a new fireproof hospital complete. It is estimated that the two offers will involve the expenditure of more than $300,000.

Urges Restoration of Medical Library.—Albany County Medical Society, at its meeting, April 12, adopted a resolution calling the attention of the legislature to the great loss sustained in the destruction of the medical division of the New York State Library, when a section of the State Capitol was destroyed by fire recently, and asking that steps be taken to restore the library.

Approves Medical Experimentation.—The house of delegates of the Medical Society of the State of New York, on April 17, adopted a resolution declaring "that animal experimentation in this state is conducted in a proper and merciful manner, and that such experimentation is positively essential in medical progress; that unmerciful experimentation is not

practiced in this state, and is prohibited by law," and opposing the bill which provides for a commission to investigate the practice of vivisection, on the ground that it is unnecessary and mischievous and calculated to hinder and cripple experimentation.

State Medical Society Meeting.—At the annual meeting of the Medical Society of the State of New York, held in Albany, April 18-20, the following officers were elected: president, Dr. Wendell C. Phillips, New York City; vice-presidents, Drs. Peter W. Van Peyma, Buffalo; William F. Campbell, Brooklyn, and Clifford R. Hervey, Oswego; chairman of the committee on scientific work, Dr. Louis Neumann, New York City; chairman of the committee on legislation, Dr. Elliott T. Bush, Horseheads; chairman of the committee on arrangement, Dr. William J. Nellis, Albany; chairman of the committee on public health, Dr. Joshua M. Van Cott, Brooklyn; secretary, Dr. Wisner R. Townsend, New York City (reelected); treasurer, Dr. Alexander Lambert, New York City; delegates to the American Medical Association, Drs. Algernon T. Bristow, Brooklyn; James W. Fleming, Brooklyn; Edward W. Mulligan, Rochester; Henry L. Elsner, Syracuse; Edgar A. Vanderveer, Albany, and Edward E. Cornwall, Brooklyn.

New York City

Mount Sinai Hospital Purchases Property.—This institution has purchased two flat buildings in East Ninety-Ninth Street for the site of the proposed pathologic building made possible by the donation of $200,000 by Adolph Lewisohn.

More Meningitis Comes From Greece.—The Greek steamship *Athinai* brought to this port three more cases of cerebrospinal meningitis, making a total of thirty-five cases brought here from Greek ports within two months. There have been eighty cases detained at Quarantine this year with a mortality of 35 per cent.

Preparing to Fight Poliomyelitis.—Several physicians have prophesied an outbreak of infantile paralysis with the advent of warm weather. The health board is preparing to grapple with the disease as it has not done before. Hitherto the law has provided only for the reporting of cases, but if the virulence of the disease seems to warrant the action, the board of health will take charge of it. Two cases have been reported in the Bronx and six in Brooklyn since March 1.

Personal.—Drs. Henry Clarke Coe and Samuel M. Brickner, who were operated on recently for appendicitis, are convalescent.——Dr. William L. Russell, superintendent of the Long Island State Hospital, and for a number of years medical inspector of the New York State Commission in Lunacy, has been elected by the board of governors of New York Hospitals superintendent of the Bloomingdale Hospital, White Plains, vice Dr. Samuel B. Lyon, who will retire July 1 after twenty-five years' service.

Buffalo

Personal.—Dr. Charles S. Meahl has been appointed sanitary expert to the department of health.——Dr. Earl P. Lothrop has returned after a winter in Florida.

City Hospital Site Selected.—The aldermen have voted that the city purchase the West Farm site containing 81 acres for the proposed city general hospital for $225,000. The site has 1,500 feet frontage on Delevan Avenue, and 2,800 feet on Grider Street.

Higher Requirements.—On April 10 the new pathologic and chemical laboratories of the University of Buffalo were inspected by the Erie County Medical Society. The regular meeting of the society was held at the medical school. At the suggestion of the faculty of the medical school, a resolution was passed, recommending that the Medical Society of the State of New York urge that one year of college work be required of medical students for entrance, and a fifth year in a hospital of all graduates.

NORTH DAKOTA

State Association Meeting.—The annual meeting of the North Dakota State Medical Association will be held in Fargo, May 9 and 10.

Personal.—Dr. Archibald L. McDonald, Grand Forks, professor of anatomy in the University of North Dakota College of Medicine, will, it is reported, sever his connection with the institution at the close of the present year and will devote his entire attention to private practice. He will still be a special lecturer on the medical faculty.——Dr. Roy W. Pense has been appointed health officer of Minot.——Dr. F. A. Bordwell, Marmath, was seriously injured in a runaway accident near that place, April 17.——Dr. William C. Eichler, Underwood, has gone to Europe.

PENNSYLVANIA

Personal.—Dr. Charles H. Mann, president of the Bridgeport Board of Health, was recently injured in an automobile accident.——Drs. W. F. Krick of Philadelphia, a graduate of University of Pennsylvania; John J. Sosnowoski, of Mahanoy City, Jefferson Medical College, and Ward J. Brinton, Philadelphia, Jefferson Medical College, have been elected resident physicians of St. Joseph's Hospital, Reading.

Sanatorium Report.—Out of a total of 3,649 cases of tuberculosis, treated at Mount Alto Sanatorium for eighteen months, those in the moderately advanced stage of the disease number 1,382, and in the far advanced stage, 1,803, according to the report just issued. Dnring this period out of 636 moderately advanced cases, discharged from the institution, 134 had the disease arrested and 375 were much improved. In the far advanced cases, 67 out of 780 had been greatly improved with the disease arrested, and 387 showed marked general improvement.

Philadelphia

New Hospital Society.—The physicians connected with the Jewish Hospital, have recently formed a clinical society and elected the following officers: president, Dr. Max H. Bochroch; vice-president, Dr. Jay C. Knipe; secretary and treasurer, Dr. Nate Ginsburg, and recorder, Dr. David Kapp.

Campaign Against Flies.—The public health committee of the Civic Club together with the health authorities will begin a crusade against flies and other harmful insects. Drs. James J. Bradley, Jr., Collin Foulkrod, Elizabeth Snyder and Edith E. Eayre will lecture in the settlement houses throughout the city, and the authorities will require all foodstuffs, such as meat, vegetables and milk, be properly screened and that all butchers and grocers keep their wares from infection from flies.

Gastroenterologists Meet.—The fourteenth annual meeting of the American Gastroenterological Association was held in Philadelphia, April 19-20. The following officers were elected: president, Dr. Walter B. Cannon of Boston; vice-presidents, Drs. John A. Lichty, Pittsburg, and William G. Morgan, Washington, D. C.; secretary and treasurer, Dr. Franklin W. White, Boston, and members of the council, Drs. Samuel J. Meltzer, New York; Charles D. Aaron, Detroit, and Julius Friedenwald, Baltimore.

Personal.—Dr. Jacques Loeb, of the Rockefeller Institute for Medical Research, delivered the address at the annual conversational meeting of the Pathological Society, April 27. His subject was "Fertilizing Effects of the Extracts of Tissues, Blood and Sperm." After the address a reception was given for Dr. Loeb at the University Club.——Prof. Svante Arrhenius, Stockholm, Sweden, will deliver the third Weir Mitchell Lecture of the College of Physicians in Mitchell Hall on May 16. The subject will be "The Passage of Microorganisms Through Interstellar Space: a Theory Bearing on the Origin of Life on a Planet."—Dr. Joseph S. Neff, director of public health and charities, has recovered and returned to his duties at city hall on April 18.——Professor Hugh Campbell Ross, director of research at the Royal Southern Hospital at Liverpool, and honorary clinical pathologist at the Royal Liverpool County Hospital for Children, will give a course of lectures during the coming month at Jefferson Medical College for the purpose of demonstrating new discoveries in the treatment of cancer.

SOUTH CAROLINA

County Association Meeting.—Edgefield County Medical Association held its annual meeting in Edgefield, March 29. Dr. John T. Hunter, Trenton, was elected president; Dr. George L. Walker, Johnston, vice-president, and Dr. John G. Edwards, Edgefield, secretary-treasurer.

Personal.—Dr. Charles F. Williams, Columbia, state health officer, has resigned, but the executive committee of the State Board has refused to consider the resignation.——Dr. John Cauzon Foster has been elected a member of the board of health and health officer of Lancaster.

State Society Meeting.—The South Carolina Medical Association held its sixty-third annual meeting in Charleston, April 18-20, under the presidency of Dr. James H. McIntosh, Columbia. The principal address was delivered by Drs. Alexander Lambert, New York City, and Judson Daland, Philadelphia. Columbia was selected as next place of meeting. The following officers were elected: president, Dr. J. Wilkinson Jervey, Greeneville; vice-presidents, Drs. Archibald E. Baker, Charleston; John H. Miller, Cross Hill, and Henry B. Lee,

Summerville; secretary, Dr. Edgar A. Hines, Seneca (re-elected); treasurer, Dr. Charles P. Aimar, Charleston (re-elected); councilors, Drs. J. Taliaferro Taylor, Adams Run (reelected); Gottlob A. Neuffer, Abbeville, and Julius A. Faison, Bennettsville; and editor of the *Journal of the South Carolina Medical Association*, Dr. Julius C. Sosnowski, Charleston (reelected).

SOUTH DAKOTA

Personal.—Drs. Charles E. McCauley, Aberdeen, and William Lowe, Madison, have been appointed members of the State Board of Medical Examiners to succeed Drs. H. F. Bright, White Lake, and Alonzo A. Cotton, Vermilion.——G. G. Redfield, Rapid City, has been appointed a member of the State Board of Osteopathic Examiners, and Dr. Robert T. Dott, Salem, a member of the State Board of Health.——Dr. and Mrs. Frank I. Putnam, Sioux Falls, have returned from abroad.

District Society Meeting.—The Eighth (Yankton) District Medical Society held an interesting meeting at the State Health Laboratory, Vermilion, March 28, followed by a banquet furnished by the physicians of the city. The program included papers on "Infection and Immunity," by Dr. Harley E. French, Vermilion; "Present Status of Serum Therapy," by Dr. Philip R. Burkland, Vermilion; "Practical Use of Autogenous Vaccines," by Dr. Edward W. Meis, Sioux City, Ia.; "Practical Laboratory Methods in the Diagnosis and Treatment of Infectious Diseases," by Dr. Mortimer Herzberg, Vermilion; and "Hypodermic Medication in Specific Disease," by Dr. S. H. Richman, Yankton. The next meeting will be held in Pierre June 15-17.

TEXAS

Sanitary Code Prosecution.—The first prosecution under the new sanitary code law of the department of health is to be held at Waco. The alleged offender in the case is the registrar of vital statistics at Mart.

State Association Meeting.—The annual meeting of the State Medical Association of Texas will be held at Amarillo, May 9-11. One feature of the entertainment will be a barbecue and out-door feast at Palo Duro Canyon.

County Society Election.—At the annual meeting of Titus County Medical Society, held in Mount Pleasant, March 23, Dr. Albert A. Smith, Goolesboro, was elected president, and Dr. William H. Blythe, Mount Pleasant, secretary.

Tents for Tuberculosis Patients.—The board of health of Dallas has approved the plan of the local Red Cross for the erection of six tents on the city hospital grounds for the isolation and care of tuberculosis patients in the City Hospital, and the tents will be erected under the direction of city health officer, Dr. Thomas B. Fisher.

Northeast Texas Physicians Meet.—At the annual meeting of the Northeast Texas District Medical Association, held in Fort Worth, April 11 and 12, Dr. Joseph H. McCracken, Mineral Wells, was elected president; Dr. John H. McLean, Fort Worth, vice-president, and Dr. A. D. Patillo, Petrolia, secretary. The next meeting will be held at Mineral Wells.

Leprosarium.—It is announced that the state home for lepers provided for by an act of the thirty-first legislature will be established by Governor Colquitt. Dr. Manton M. Carrick has been appointed superintendent and a commission of three men, including the state health officer to be one, will be appointed immediately to locate the institution. An appropriation of $40,000 was made by the legislature for the purpose of establishing the institution and maintaining it until August 31.

UTAH

Resolutions Regarding Dr. Carnahan.—Weber County Medical Society, at its regular meeting, April 19, adopted resolutions setting forth the high and honorable work done by the late Dr. John D. Carnahan, Ogden, a member of the society, presenting a sketch of his life and deploring his death.

Amendment to Medical Practice Act.—Utah has just secured legislation providing important amendments to its medical practice act. Among other things, the new act provides for higher standards of preliminary education, revocation of licenses for unprofessional conduct and a better definition of the practice of medicine.

VERMONT

Drinking Cups Prohibited.—The first quarterly bulletin of the State Board of Health for the year contains a copy of the regulations adopted by the board, prohibiting the use of the common drinking cup in all public places, parks, fountains, school houses, factories, mills, workshops, libraries, public halls or other public buildings, railroad stations and railroad trains on and after May 1.

VIRGINIA

New Hospitals.—Drs. Robert C. Bryan and H. Stuart MacLean have approved plans for a hospital to be built at Grace and Monroe streets, Richmond, to cost about $60,000.——Dr. J. Shelton Horsley, Richmond, has under consideration plans for a private hospital to be erected at Pine and Grace streets.

Personal.—Dr. William A. Deas, Richmond, has resigned as physician to the Lee Camp Soldiers' Home.——Dr. George T. Myers, Norfolk, has been appointed medical assistant in the health department.——Dr. John J. Lloyd, Jr., Lynchburg, has succeeded Dr. W. E. Jennings as assistant resident physician at Catawba Sanatorium.——Dr. Clarence W. Cowper, Norfolk, appointed medical inspector of the health department, has resigned as alderman of that city.——Dr. Thomas F. Keen, Hamilton, announces his retirement from active practice.

WISCONSIN

Medical Press Board.—At a meeting of the Milwaukee County Medical Association, April 14, a board of censors, otherwise known as a press committee, was appointed, whose duty is to supervise, so far as possible, all articles appearing in the lay press relative to the medical profession or dealing with medical subjects.

Contagion and Eddyism.—The Milwaukee County Medical Society appointed a committee at a special meeting, April 16, "to investigate the attitude of the Christian Science church toward the practice of medicine with especial reference to the treatment of contagious diseases." It was reported that there were, on that day, fifty-three cases of scarlet fever in one ward of the city being treated by Eddyist healers.

Antituberculosis Society Meeting.—The new Wisconsin Antituberculosis Association held its meeting in Milwaukee, April 11, and elected officers. Dr. Harry Greenberg, Milwaukee, was elected chief of the medical staff. A fresh-air camp for tuberculous convalescents will be established on the Kern tract, the use of which has been given the society by the park board. Tents accommodating two patients each will be erected, and the camp will be known as the Social Workers' Tuberculosis Sanatorium.

Personal.—Dr. Clinton H. Lewis, Bayview, Milwaukee, sustained serious injuries of the head and back in a runaway accident, April 17.——Dr. Bernard C. Gudden was guest of honor at a banquet given by the Oshkosh Medical Club, April 14, in commemoration of the thirtieth anniversary of Dr. Gudden's entrance into practice of medicine in Oshkosh.——Dr. Richard J. Muenzner, Allenton, has been elected secretary of the American Medical Association of Vienna.——Dr. Charles R. Bardeen has been reelected president of the board of directors of the Madison General Hospital Association.——Dr. John M. Dodd has been elected mayor of Ashland.——Dr. James V. Canavan has been elected mayor of Appleton.

GENERAL NEWS

Confederate Surgeons to Meet.—The Association of Medical Officers of the Army and Navy of the Confederacy will hold its annual meeting at Little Rock, Ark., May 16-18, at the same time as the reunion of the United Confederate Veterans. Dr. Edwin D. Newton, Atlanta, Ga., is president, and Dr. A. A. Lyon, Nashville, Tenn., secretary of the association.

Therapeutic Program.—The twelfth annual meeting of the American Therapeutic Society will be held in Building "B," Harvard Medical School, Boston, May 11-13, under the presidency of Dr. Harvey W. Wiley, Washington, D. C. The subject of the presidential address will be "Bromato-Therapy," and the scientific program shows twenty-nine titles. The annual dinner will be given at the Hotel Vendome on the evening of May 12.

Travel Study Group.—Dr. Johannes Nietner, secretary of the permanent International Commission on Congresses of Hygiene and Demography, and secretary-general of the fourteenth congress, announces that a group of German physicians is planning a study tour in the United States in the summer of 1912 in connection with their visit to the coming congress, and that for the final arrangements, the group will send a representative to the United States in the autumn of this year.

Manila Physicians Meet.—The annual meeting of the Manila Medical Society was held in the Philippine General Hospital, January 9. The following officers were elected: president, Major Weston P. Chamberlain, M. C., U. S. Army; vice-pres-

ident, Dr. Robert E. L. Newberne; editor, Dr. William E. Musgrave; acting editor, Dr. Vernon L. Andrews; secretary and associate editor, Dr. F. B. Bowman; treasurer and business manager, Dr. Harry D. Kneedler, and councilors, Drs. Musgrave and Andrews.

Alumni Meeting.—The annual dinner of the New England Alumni Association of the University of Vermont was held in Boston recently and was attended by about seventy-five alumni. Dr. Walter D. Williamson, Portland, Me., was toastmaster. The following alumni of the medical department were elected officers: president, Dr. Walter D. Williamson, Portland, Me.; vice-presidents, Drs. Frank W. Page, Boston, and Frank H. Clapp, North Grafton, Mass., and member of executive committee, Dr. C. Parker Holt, Cambridge, Mass.

Society of Tropical Medicine.—The eighth annual meeting of the American Society of Tropical Medicine will be held in Tulane University, New Orleans, May 18 and 19, under the presidency of Dr. William S. Thayer, Baltimore. The first scientific session will be devoted to papers on malaria, the afternoon session to leprosy and sprue. The morning session of the second day will be occupied by general discussion on amebiasis, and the afternoon to election of officers and papers on pellagra, yellow fever and miscellaneous subjects.

Alcohol and Drug Habits Studied.—The American Society for the Study of Alcohol and Other Narcotics held its fortieth annual meeting in Baltimore, April 19 and 20. The principal address was delivered by Dr. Winfield S. Hall, Chicago, on "Biological and Physiological Relations of Alcohol." The following officers were elected: president, Dr. Winfield S. Hall, Chicago; vice-president, Dr. Lewis D. Mason, Brooklyn; corresponding secretary and treasurer, Dr. Thomas D. Crothers, Hartford, Conn.; recording secretary, Dr. G. H. Benton, Doublinggap, Pa., and member of the executive committee, Dr. Thomas A. MacNicholl, New York City. Resolutions were adopted asking the government to use its influence to prevent the sale of opium in China.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, April 8, 1911.

A Public Health Museum

The National League for Physical Education and Improvement has proposed that the London memorial to the late King Edward, whose great interest in sanitary problems is well known, should take the form of a public health museum. In a recent conference of health-promoting institutions, a discussion on the need of coordination disclosed the existence of over eighty such national agencies in London and of a large number of local agencies in London and throughout the country. It was shown that these suffered much both in finance and work from overlapping, from separation of offices and staff, and from lack of coordination. The striking success of the tuberculosis exhibition opened in Dublin and then transferred to the Irish Village in the exhibition at London and to other places throughout the country, demonstrated the great interest taken by the public in sanitary questions. It is proposed to erect a popular museum which should accommodate a permanent collection and also furnish duplicate material for the equipment of traveling vans. It should be a model in constant and close relation with provincial museums to which it would probably give birth. It might also become a loan center for the distribution of replicas of its models and diagrams for circulation among schools and institutions. The building should also form a nucleus for the coordination of the various health-promoting institutions, both metropolitan and national. For this purpose, it should include the following: Two or three meeting halls of different sizes, ten or twelve committee rooms, central offices, a library and reading rooms, lecture rooms, workshop and draftsman's room. The cost of maintenance would be met, to some extent, by the rental of suites of offices, halls, committee rooms, especially by health-promoting conferences and institutions, and to some extent by small fees for courses of instruction. In the main, however, instruction must be given at a low cost, fees being charged only when they will guarantee greater interest in those who pay, and being reduced to such a level as will admit of the greatest possible use of the facilities provided. This would be sufficient grounds for appealing for subscriptions to trades unions, friendly societies, insurance companies and the general public. An appeal will be made for a memorial sum of $500,000 and a subscription of $25,000 a year as a minimum. The early cooperation of organizations of the working classes and of those working for the prevention of tuberculosis and alcoholism will be sought.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, April 14, 1911.

The Wassermann Reaction as a Means of Detecting Latent Syphilis

At a recent session of the Académie de médecine, Drs. Letulle and Bergeron read a paper based on the investigation of the Wassermann reaction in ninety patients affected with chronic diseases. There were thirty-nine positive reactions. This was to be expected among a large number of these where the patients were paraplegic and subjects of aortic lesions. Moreover, a positive reaction was obtained in subjects of chronic nephritis, non-tuberculous pulmonary diseases, cerebral or meningeal hemorrhages, etc. Among cases which came to autopsy (twelve) the existence of old or recent syphilitic lesions was ascertained.

The conclusion is that an almost absolute diagnostic value should be given to a positive Wassermann reaction; a negative reaction, however, does not prove that there is no syphilis.

Insufficiency of the Means Employed to Prevent a Drug from Dissolving in the Stomach

On April 7 Dr. Linossier of Vichy called the attention of the Association médicale des hôpitaux de Paris to a practical point of current therapeutics. To preserve a drug (pancreatin for example) which is soluble in gastric juice from contact with this liquid, as well as to avoid the irritating action of certain substances like potassium iodid on the stomach walls, it is customary to enclose these substances in an envelope which is not affected by the gastric juice; and it is supposed that the contents escape only when the envelope is digested by the pancreatic juice. These envelopes, which are usually made of gluten, keratin, or formalinized gelatin, are used to ascertain the strength of the pancreatic secretion. Now, while these envelopes resist the gastric juice, it is very easy to show that the soluble substances enclosed in them pass out by osmose from the time the capsule is swallowed, that is, very rapidly. On plunging commercial capsules of potassium iodid with keratinous or glutinous coating into gastric juice, or even into water, Dr. Linossier has seen reactions of iodin in the surrounding liquid appear in less than a minute. The use of such capsules to protect soluble substances from gastric juice is then altogether unsatisfactory. They may, however, protect an insoluble substance.

Prizes of the Society of Infant Hygiene

The Société d'hygiène de l'enfance has offered a prize for a paper on the following question: *Les cantines scolaires, leur utilité; que doivent-elles être?* (Public provision of lunches for school children: their utility; what ought they to be?). The manuscripts should be received before Dec. 31, 1911. They should be unpublished, written in French, German, English, Italian or Spanish. They should not be signed but each should bear a device or superscription reproduced on a sealed envelope containing the name and address of the author. The society reserves the right to draw from the best work materials for a pamphlet for propaganda and instruction. The papers should be addressed to the Président de la Société d'hygiène de l'enfance, 10, rue Saint-Antoine, Paris.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, April 7, 1911.

Personal

Prof. v. Eicken of Giessen has been appointed regular professor of otology, laryngology and rhinology. This is another instance, in a Prussian University, where a full professorship has been established to take the place of a special lectureship (*Extraordinariat*).

The Cremation Bill

As was to be expected and as I predicted, the bill for the permission of cremation was rejected by the committee of parliament, the vote being a tie. The eventual passage of the bill by a committee of the whole, in the house of delegates, is scarcely probable, owing to the lively objection of the center and conservatives, "the opposition."

Prolongation of Life

Professor Rahts of the imperial statistical office spoke March 24 before the society for insurance science on the prolongation of life, comparing the mortality of the German population with that of other civilized countries. Since 1871

the number of deaths in Germany has remained nearly constant, amounting to about 1,200,000 annually, although the population has risen from 41,000,000 to 65,000,000. The death-rate for 1871 was 30.6 per 1,000, that for 1909, only 18, a very marked reduction.

The estimation of the death-rate is fallacious, however, in comparing various cities of town and country. One must go back to the figures for the single age periods if he wishes to avoid mistakes in determining a relative death-rate. But this concerns only an ideal group of the population who have been subjected through their whole life to the mortality conditions that prevail in each decade. The average duration of life then shows how many years these groups of individuals have lived. Examination of the curves shows that the minimum and the maximum have not behaved in the same manner, but the minimum has sunk and the maximum risen, so that the mortality under 48 has become less, while that above 48 has grown larger. The typical duration of life in Germany is 71 years in men, 73 in women (in Norway 78 years), so that the saying of the psalmist, "The days of our years are three score years and ten," Psalm xc, still holds true. While this increase in the length of life is gratifying, it is in accord with that in other civilized countries, for in Sweden it has increased ten years, in Belgium and Holland 5, in England 3, in France 4, while only in Italy and Austria do the figures show only a trifling advance. If a comparison in percentages be made the figures for Germany are more favorable, showing an increase of 9.1 per cent. against 1.1 per cent in England. The reason for the slighter rise in Germany is the large infant mortality.

The average length of life is often taken as an index for the productive power of a people, but this is not quite correct because infants and the aged are included. Rahts has calculated the average for the productive period of life from 16 to 60 years and has shown that for this class the average length of life has increased one and three-fourths years from 1870 to 1900. As 1,200,000 enter their sixteenth year annually, this increase means an addition of 2,000,000 years of labor for the community, a gain that is largely due to the social legislation and the improvement in hygiene, so that these measures richly pay for the expense involved. Rahts then proceeds to consider the significance of the corrected figures and asserts that a population in vigorous growth gives different figures than a stationary population. The average duration of life is not sufficient to give a correct picture of the mortality rate, but it is necessary to have an estimate of the death liability. The vitality of a people reckoned from this figure shows how many are living for one death. Rahts reaches the conclusion that it has increased in every age class, rising rapidly in men and sinking again rapidly, while in women the curve is more gradual. This agrees with the results of observations by the medical school inspectors who have found that girls are more frail.

The curve of death liability in men follows a peculiar course: after a fall up to the thirteenth year there ensues a rise to the twenty-first, after which it remains stationary a few years and then rises again. As this peculiarity is found in France as well as in Germany, while in England the stationary period does not occur, it is probable that this stationary period is attributable to the salutary influence of enforced military service in France and Germany. If deaths from tuberculosis are excluded, the curve loses its peculiar character and becomes similar to that in women, so that it is possible also that the differing effect of tuberculosis on the two sexes is responsible.

The Census

According to the current data of the last census taken in 1910 the entire population of Germany was 64,896,881, an increase over the last census in 1905 of 4,255,603 (7.02 per cent.), which means a yearly increase for the German empire of 800,000. It is notable that there is a decrease in the excess of females in Germany. While in 1906 there were still 1,500,000 more women than men, in 1909 only 1,000,000 more women could be found and the census of 1910 shows an excess of females amounting to only 800,000.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, April 1, 1911.

Statistics About Practitioners in Austria

The official figures dealing with our profession are now accessible and their perusal affords a good insight into the prospects of the medical career in this country. The number of inhabitants at the end of 1910 was 28,000,000 in the Austrian part of the empire, which forms the subject of the official report. There were 13,202 licensed duly qualified medical men practicing, including about 1,250 military doctors who were compelled to do private practice also because there was no other doctor living in the district—which fact illustrates the paucity of doctors in some places. Since 1905 the population has increased by 4 per cent. and the number of practitioners by over 6 per cent. In the report the year 1887, when the present overproduction of doctors commenced, is taken as basis. The number of doctors has increased since that year by 76 per cent., but the population has increased only a little less than 30 per cent. At that time, the ratio of distribution of doctors was 1 for each 3,242 of the population. Now it is one doctor for 2,175. The highest increase was in the largest cities, while in the country there is at present still a decided scarcity of medical men. The increase of doctors is also well illustrated by the figures concerning university pursuits of students. In 1887 the proportion of medical students was 30 per cent. of all university students; in 1895 it was over 40 per cent. The output of doctors by graduation was 5,075 from 1887 till 1895; from 1896 to 1905 it was 7,225. At the same time, however, the number of doctors who settled down and were practicing had increased by 4,500 only, indicating, either that the annual mortality of doctors, which is computed at 18 per cent., is much higher than calculated or, what is more likely, that a large number of graduated doctors preferred to give up the fight for a practice and either emigrated or turned to another occupation.

Hand in hand with the absolute increase of doctors, who do not see their way to live outside of the great towns, specialization has been favored in a very high degree with us. There are, for instance, 475 specialists in Vienna, and 200 in Prague, or in Vienna 16 per cent. of the doctors, in Prague over 25 per cent. have become specialists. These towns, however, are also university towns, where specialists are very frequent for obvious reasons. A large number of doctors practice in health resorts where they have only a season practice. In Karlsbad there are 163, in Meran 76, in Baden 53, in Marienbad 69, in Bozen 37 and Abbazia 36 doctors who live there for only part of the year. The number of these part-time practitioners has increased within five years by 18 per cent. Quite different are the figures pertaining to the local and territorial distribution of doctors. While in certain cities the proportion is exceedingly high, in the country districts the scarcity is alarming. For instance, in Olmütz, a town of 60,000 inhabitants, there is one doctor for each 390 inhabitants. In Trieste we find one to 1,010, while Vienna has one to 610, and Prague one to 560. On the other side, in lower Austria (one of the most cultivated countries of the empire) the figure is one to 2,030, in Styria it is one to 3,075, while the lowest figures are in Galicia, one to 10,000 inhabitants. In these latter countries it is evident that the poverty of the population and the low standard of life deter an educated man from settling down, unless he comes from this stock. There is only one possibility of subsisting—appointments which will furnish a maintenance. The payments are not very high, 1,000-3,000 kronen ($200-$600) per annum. Nevertheless, there was a fairly large number of such appointments vacant for a period of longer than two years because no man was willing to accept the post. Altogether, about 60 per cent. of all doctors hold one or other appointment with the state, the government or the *Krankenkasse* (sick club); while the remainder are satisfied with a strictly private practice. The number of female practitioners in Austria is eighty; seven years ago it was only ten, and they have settled down in towns only. Three are practicing in health resorts, and sixteen have appointments with the sick clubs of the laborers (*Arbeiter Krankenkasse*) for the female members. Only thirty-two school doctors have been reported as such at the end of 1910.

In this country we have three large provident societies of doctors, membership being compulsory in none of them. The number of members is 1,080, 740 and 3,200 respectively, and they provide sick pay for their members, varying between $1 and $2 per day, as well as a sum equal to about one-half dollar per member in case of death, so that the widow or the dependents receive at once a few hundred dollars. Of course, there are besides other but smaller societies with similar aims.

The average age of the doctor obtaining an M.D. diploma in this country is 27½ years; the average expectation of life is 53 in the country, 55 in cities; which also illustrates the worse conditions prevailing in the country. It is also interesting to note that doctors are not very fertile, the average number of children of practitioners being two. The reasons will here too be found in the low standard of income of an average doctor.

Marriages

FRANK L. TRUITT, M.D., Indianapolis, to Miss Maide Zulich, at Indianapolis, April 25.

HERBERT A. THOMAS, M.D., Lima, O., to Miss Annabel Alling of Warren, O., March 15.

ROY WHITTIER PORTEUS, M.D., Chicago, to Miss Edith S. Wells of Evanston, April 18.

ELMER LEE HENDERSON, M.D., Louisville, Ky., to Miss Laura B. Owen of Austin, Minn., at Springfield, Ky., April 4.

JACOLYN VAN VLIET MANNING, M.D., Manhattan, New York City, and Christian Sofian Ernest Spoerl of Wilkes-Barre, Pa., in New York City, March 22.

Deaths

Charles Stedman Bull, M.D., a prominent ophthalmologist of New York City, died in the Presbyterian Hospital in that city, April 17, from valvular heart disease, aged 66. He was graduated from the College of Physicians and Surgeons, New York City, in 1868, and then studied in Europe for ten years, devoting himself especially to ophthalmology, otology, and pathology. He was a member of the American Medical Association, American Ophthalmological Society (of which he was president from 1903 to 1907), New York Academy of Medicine, and New York Ophthalmological Society. He was assistant surgeon to the Manhattan Eye and Ear Hospital from 1871 to 1873, assistant surgeon and surgeon to the New York Eye and Ear Infirmary since 1871, a member of the visiting staff of Charity Hospital from 1875 to 1880, and consulting ophthalmic surgeon to the Presbyterian, St. Luke's and St. Mary's hospitals. Since 1898, Dr. Bull had been professor of ophthalmology in the Medical Department of Cornell University. He made many contributions to the literature of his specialty.

Edmond Robillard, M.D. Laval University, Montreal, 1847; Nestor of the medical profession of Canada; died at his home in Montreal, January 13, from cerebral hemorrhage, aged 86. in Montreal, January 13, from cerebral hemorrhage, aged 86. In 1859 he was elected one of the governors and examiners of the College of Physicians and Surgeons of Canada, and from 1868 to 1874, he was registrar of the college. Bishop's College, Lennoxville, Que., conferred on Dr. Robillard, in 1873, the *ad eundem* degree of doctor of medicine. The honorary degree of master of surgery was also conferred on him by the Medical Faculty of Victoria College, Coburg, Ont., in 1881. He was for many years a member of the Canadian Medical Association, in 1882 its treasurer, and a year later, he was elected vice-president. He was also chief inspector of lunatics for the Province of Quebec and one of the assessors of Bishop's College. From 1884 to 1900, Dr. Robillard lived in Paris returning to Montreal in the latter year.

James Bell, M.D. McGill University, Montreal, 1877; a famous surgeon of Canada; died in the Royal Victoria Hospital, Montreal, April 11, from pneumonia, aged 58. Dr. Bell was probably the best known surgeon of the Dominion, and a man of sterling worth. After his graduation, he became house surgeon of the Montreal General Hospital, was promoted to medical superintendent in 1881, was made assistant surgeon on the staff in 1885, and surgeon in the following year. On his appointment in 1894 as surgeon in chief to the Royal Victoria Hospital, he was elected consulting surgeon to the Montreal General Hospital. He was a member of the British Medical Association, Canadian Medical Association, American Surgical Association and American Association of Genito-Urinary Surgeons. In 1888, Dr. Bell was appointed associate professor of clinical surgery in his alma mater, was made assistant professor of surgery and clinical surgery two years later, and professor of clinical surgery in 1894.

Henry Lyman Shaw, M.D. Harvard Medical School, 1859; for many years a member of the American Medical Association; a member of the Massachusetts Medical Society, American Ophthalmological Society, American Otological Society, and American Association for the Advancement of Science; a district physician of Boston for five years; a pioneer oculist and aurist of Boston; from 1861 to 1864, assistant surgeon, and from that time until 1892 surgeon to the Massachusetts Charitable Eye and Ear Infirmary, and then a member of its consulting staff; died at his home in Boston, April 2, aged 73.

Richard Thomas Styll, M.D. Medical College of Virginia, Richmond, 1877; a member of the Medical Society of Virginia, and president of the Newport News Medical Society; physician in charge of the Richmond Small-Pox and Fever Hospital in 1881; and of the Pinel Hospital in 1885 and 1886; from 1887 to 1896, resident physician of the Hollins Institute, and from 1896 to 1899, first assistant at the Central State Hospital, Petersburg; died at his home in Newport News, April 1, from cerebral hemorrhage, aged 57.

Edward Patrick Stanley Hart, M.D. Long Island College Hospital, Brooklyn, 1897; a member of the American Medical Association; assistant visiting surgeon to St. Francis Hospital, Jersey City; surgeon to the North Jersey Street Railway Company and United Electric Company; captain and assistant surgeon N. G., N. J., assigned to the Second Battalion, Fourth Regiment; for a time connected with the health department; died at his home in Jersey City, April 10, from pneumonia, aged 38.

Robert Rae, M.D. New York University, New York City, 1858; a member of the Medical Society of the State of New York, and at one time president of the Wyoming County Medical Society; for several terms coroner of Wyoming County; assistant surgeon of the First New York Dragoons during the Civil War; a member of the local board of pension examining surgeons; died at his home in Portageville, April 1, from cirrhosis of the liver, aged 76.

James Robert Zearing, M.D. Rush Medical College, 1850; surgeon of the Fifty-Seventh Illinois Volunteer Infantry and later chief surgeon of the Fourth Division, Fifteenth Army Corps serving throughout the Civil War; said to have been the oldest alumnus of Rush Medical College; who had been blind for twenty-five years; died at his home in Chicago, April 16, from cerebral hemorrhage, aged 81.

Christopher Charlton Oliver, M.D. Atlanta (Ga.) Medical College, 1867; a member of the Medical Association of the State of Alabama; a Confederate veteran, and state senator in 1901; formerly surgeon general on the staff of the Fourth Brigade, Ala. Confederate Veterans; local surgeon to the Louisville and Nashville Railway; died at his home in Calera, March 22, aged 64.

John Jacob Koser, M.D. University of Pennsylvania, Philadelphia, 1881; a member of the American Medical Association; treasurer and once president of the Cumberland Valley Medical Association; local surgeon to the Philadelphia and Reading and Western Maryland Railways; chief burgess of Shippensburg, Pa.; died at his home, April 13, from angina pectoris, aged 53.

Richard W. Reasoner, M. D. Medical College of Ohio, Cincinnati, 1883; aged 50; formerly president of the board of health of Morrisonville, Ill.; for the last ten years a resident of Colorado Springs, Colo.; was shot and instantly killed in that city in an attempted holdup, April 14, in which, however, he mortally wounded his assailant.

William H. Clutter, M.D. Cincinnati College of Medicine and Surgery, 1868; a member of the American Medical Association; a veteran of the Civil War; superintendent of health of Oklahoma City and physician of Oklahoma County; a pioneer practitioner of Oklahoma; died at his home in Oklahoma City, April 12, aged 78.

Joel Gilbert Justin, M.D. University of Pennsylvania, Philadelphia, 1875; instructor in chemistry and professor of medical jurisprudence in Syracuse (N. Y.) University from 1886 to 1890; died at his home in Castile, N. Y., March 27, from bronchitis, after an invalidism of eight years due to cerebral hemorrhage, aged 59.

William McMillan, M.D. Starling Medical College, Columbus, O.; assistant surgeon of the Ninth Ohio Volunteer Cavalry and surgeon of the Fifth Ohio Volunteer Cavalry throughout the Civil War; since 1879 an attorney; died at his home in Massillon, O., February 12, from senile debility, aged 77.

Eugene E. Whitaker, M.D. Long Island College Hospital, Brooklyn, 1881; for several years health officer, village trustee and school director of Newport, Vt.; once president of the State Homeopathic Medical Society; died in a hospital in Montreal, March 25, after a surgical operation, aged 62.

John Henry Sanborn, M.D. Berkshire Medical College, Pittsfield, Mass., 1852; for fifteen years city physician of Newport, R. I.; a veteran of the Civil War, and acting assistant surgeon, U. S. Army, for about twenty years thereafter; died at his home in Newport, April 2, from senile debility, aged 75.

Henry S. Wright, M.D. Atlanta (Ga.) Medical College, 1893; a member of the American Medical Association; at one time professor of obstetrics in the International Medical Missionary College, Atlanta; died in a sanitarium in that city, April 9, from cerebral hemorrhage, aged 53.

Adoniram Judson Clark, M.D. Keokuk (Ia.) Medical College, 1892; a member of the American Medical Association; for twenty-eight years a practitioner of Nebraska, and for several years coroner of Boone County; died at his home in Albion, April 11, from pneumonia, aged 59.

Adoniram Judson Wakefield, M.D. Harvard Medical School, 1855; a member of the Florida Medical Association; a surgeon of volunteers during the Civil War, and since that time a practitioner of Jacksonville; died in that city, March 28, from senile debility, aged 87.

Frank E. Kitzmiller, M.D. Fort Wayne (Ind.) College of Medicine, 1879; of Piqua, O.; a member of the American Medical Association; special small-pox expert for the State Board of Health; and health officer of Piqua for fifteen years; died at his home, March 27, aged 61.

John Robinson Hoskins, M.D. Jefferson Medical College, 1905; a member of the American Medical Association; died at his home in West Chester, Pa., April 6, from cerebral abscess following a suppurative mastoiditis, consequent on an attack of influenza, aged 30.

Henry Krollpfeiffer, M.D. College of Physicians and Surgeons, New York City, 1875; a member of the Medical Society of the State of New York; president of the New York Liederkranz for three terms; died in the German Hospital, New York City, April 12, aged 62.

Frederick Birdseye Baker, M.D. University of Maryland, Baltimore, 1888; a member of the American Medical Association; and of the staff of the Norwalk (Conn.) Hospital; died at his home in East Norwalk, April 18, from cerebral hemorrhage, aged 55.

Reuben Harmon, M.D. University of Wooster, Cleveland, 1881; Western Reserve University, Cleveland, 1882; of Onowa; formerly a member of the Iowa State Medical Society; died in Denver, Colo., January 12, from the effects of a fall down stairs, aged 64.

Henry St. Clair Ash, M.D. Pennsylvania Medical College, Gettysburg, 1850; of Philadelphia; a member of the Medical Society of the State of Pennsylvania; died in St. Joseph's Hospital, Philadelphia, April 6, from cerebral hemorrhage, aged 85.

Louis B. Craig, M.D. Missouri Medical College, St. Louis, 1879; formerly a member of the American Medical Association; a member of the Missouri State Medical Association; died at his home in Salem, April 9, from pneumonia, aged 58.

David Smith Williams, M.D. University of Nashville, Tenn., 1858; said to have been the oldest practitioner of Texarkana, Ark.; a surgeon in the Confederate service throughout the Civil War; died at his home, March 23, from influenza, aged 75.

Emory B. Johns, M.D. Chicago Homeopathic Medical College, 1886; of Lexington, Ky.; was found dead in a hotel in that city, April 6, from the effects of a drug believed to have been self-administered with suicidal intent, aged 66.

Joseph Alfred Beall, M.D. Hospital College of Medicine, Louisville, 1891; a member of the State Medical Association of Texas; local railway surgeon at Center Point; died at the home of his father in San Marcos, Dec. 11, 1910, aged 50.

Thomas Hamilton Gray, M.D. University of Michigan, Ann Arbor, 1871; a veteran of the Civil War; formerly a member of the Erie County (Pa.) Medical Society; died suddenly at his home in Erie, April 5, from rheumatism, aged 70.

William Covington Wall, M.D. Pennsylvania Medical College, Gettysburg, 186—; formerly a member of the DeSoto County (Miss.) Medical Society; died at his home in Hernando, July 2, 1910, from uremia, aged 73.

Hiram Harrison Miller, M. D. Medical College of Virginia, Richmond, 1861; a member of the Medical Society of Virginia, and a Confederate veteran; died at his home in Elkton, April 10, from cerebral hemorrhage, aged 73.

Charles A. O'Brien, M.D. St. Louis College of Physicians and Surgeons, 1897; of Fillmore, Ind.; formerly coroner of Putnam County; was found dead in Fillmore, April 7, from the effects of an overdose of chloral.

James Lewis Miller, M.D. Eclectic Medical Institute, Cincinnati, 1894; formerly of Providence, R. I.; a specialist on diseases of the eye, ear and throat; died at his home in Pendleton, Ore., Sept. 27, 1910.

George Gleason Sabin, M.D. University of Michigan, Ann Arbor, 1868; for thirty years a practitioner of Black River, N. Y.; a veteran of the Civil War; died at his home, March 28, from paralysis, aged 72.

Oliver Perry Piper, M.D. Jefferson Medical College, 1872; for fifteen years a practitioner of Schuylkill Haven, Pa.; and physician to the Schuylkill County Hospital; died in Harrisburg, March 17, aged 62.

Edward A. Flewellen, M.D. Jefferson Medical College, 1851; inspector of hospitals in the Confederate service during the Civil War; died at his home, The Rock, Ga., Dec. 9, 1910, from pneumonia, aged 93.

Telemachus N. Bennett, M.D. Kentucky School of Medicine, Louisville, 1893; for two terms deputy coroner of Marion County, Ind.; died at his home in Broad Ripple, April 12, from nephritis, aged 68.

Maria J. Cushing, M.D. New York Medical College and Hospital for Women; for many years a practitioner of Washington and New York City; died at her home in Lynn, Mass., April 9, aged 76.

Lucius A. Squires, M.D. Castleton (Vt.) Medical College, 1851; one of the oldest practitioners of Columbus County, Wis.; died at his home in Poynette, April 10, from paralysis, aged 86.

Edgar T. Walker, M.D. Tulane University, New Orleans, 1882; of Trinity, Tex.; local surgeon for the Missouri, Kansas and Texas Railway; died in San Angelo, Tex., March 31, aged 61.

William Munro Workman, M.D. Hahnemann Medical College, Chicago, 1883; a veteran of the Civil War; died at his home in Grand Junction, Ia., March 15, from heart disease, aged 68.

Rose DeL. Winters, M.D. Homeopathic Medical College of Missouri, St. Louis, 1900; of Kansas City, Mo.; died in Mercy Hospital, Clinton, Ia., February 16, from typhoid fever, aged 49.

Hugh L. Kimberlin, M.D. Kentucky School of Medicine, Louisville, 1852; a retired practitioner of Mitchell, Ind.; died at his home, Dec. 2, 1910, from chronic nephritis, aged 79.

Nathaniel P. Jelks, M.D. Bellevue Hospital Medical College, 1868; a member of the Medical Association of Georgia; died at his home in Hawkinsville, March 27, aged 65.

Howard Miller Taggart, M.D. University of Pennsylvania, Philadelphia, 1896; of Wilkes-Barre; died at a cottage on Wilkes-Barre Mountain, March 30, aged 44.

John Allen White, M.D. Tulane University, New Orleans, 1853; a Confederate veteran; died at his home in Huntsville, Tex., April 3, from senile debility, aged 81.

William D. Bell, M.D. Jefferson Medical College, 1855; a member of the Louisiana State Medical Society; died at his home in Lake Providence, April 9, aged 82.

John Perrie, M.D. Washington University, St. Louis, 1867; a Confederate veteran; of Mayview, Mo.; died in Eads, Colo., March 23, from peritonitis, aged 70.

Edmond James McLennan, M.D. Trinity Medical College, Toronto, 1899; died at his home in Medford, Okla., January 27, from heart disease, aged 46.

Alfred D. McMaster, M.D. Missouri Medical College, St. Louis, 1879; died at his home in Le Grand, Cal., January 26, from nephritis, aged 54.

Daniel Webster Camp, a practitioner of Wyalusing, Pa.; died at his home in that place, February 6, from valvular heart disease, aged 65.

Joseph W. Taylor, M.D. Memphis (Tenn.) Hospital Medical College, 1894; died at his home in Hickory Valley, Tenn., April 3, aged 38.

Joseph Fred Demers, M.D. Laval University, Quebec, 1894; died at his home in Levis, Que., Dec. 26, 1910, from typhoid fever, aged 39.

George Taylor, M.D. University of Louisville, Ky., 1910; died at his home in Kempton, Ill., April 1, from appendicitis, aged 23.

Elston Chamberlain, M.D. Rush Medical College, 1863; died at his home in Dallas, Tex., February 22, from pneumonia, aged 69.

Frank G. Osborne, M.D. University of Buffalo, N. Y., 1868; died suddenly at his home in East Aurora, N. Y., March 2, aged 66.

Allen V. Wright (years of practice, Tex.); died at his home in Corsicana, June 31, 1910, from nervous prostration, aged 71.

Diagnosis of Tuberculosis of the Breast.—This may give rise to much difficulty. The infection may remain localized to one portion of the breast, and give rise to a hard, painless mass. Eventually, softening occurs with the formation of subcutaneous abscess, and sinus formation of this may be delayed for some time.—H. M. Rigby, in the *Practitioner.*

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

PANTOPON REJECTED

Report of the Council on Pharmacy and Chemistry

A referee of the Council reported that Pantopon was not eligible for inclusion with New and Nonofficial Remedies and recommended that the reasons for its rejection be published. The Council voted to adopt this recommendation and in accordance with its regular procedure the facts were reported to the manufacturers before publication. The firm's reply having been received, the Council authorized publication of the report which appears below.

W. A. PUCKNER, Secretary.

PANTOPON

Under this name, the Hoffmann LaRoche Chemical Works submitted a pharmaceutical preparation of opium, consisting of a mixture of the hydrochlorids of the various opium alkaloids, as extracted directly from the drug, with more or less purification.

The Council holds that this name does not effectively suggest that the preparation is a mixture of opium alkaloids, as is required by the part of Rule 8 which reads:

"In the case of pharmaceutical preparations or mixtures the trade name must be so framed as to indicate the most potent ingredients."

and further explains:

"It is particularly important that actively poisonous or habit-forming drugs be not disguised under an innocently worded title."

The Council maintains that the name "Pantopon" does not sufficiently protect the public against the habit-forming and other dangers inherent in such mixtures. The manufacturers, on being informed of these objections, offered to substitute the name "Omopon." As this is open to the same objections, it could not be accepted by the Council. After much correspondence, the manufacturers refused to consider any other name which would more definitely suggest its composition.

The Council is therefore forced to reject the product and has ordered the publication of this report.

COMMENT: This is a case in which the rules of the Council are in conflict with the views of the manufacturers and the Council is bound in consistency to stand by its rules, which are framed to protect the public and the profession. Pantopon is not a definite chemical body, but a mixture of known substances—the several alkaloids naturally occurring in opium—and the Council's rules require that such a preparation should bear a name indicative of its composition. The name "Pantopon" although it might suggest opium to those well acquainted with Greek would not do so to all and it would be relatively easy for physicians to fall into the habit of using it indiscriminately without realizing fully the character of the preparation, and the preparation thus becomes a menace to the public.

As to the merits of the preparation itself, it is remarkable what a literature has been built about a simple mixture of the opium alkaloids. The preparation is claimed to be superior to opium because it is more readily soluble. This trifling advantage seems to have been sufficient, however, to justify the publication of a dozen or more pamphlets. But in reality, this preparation is nothing more, therapeutically, than a form of opium and, therefore, should be known to the physician as opium. The reports made of its action seem to indicate a lack of critical sifting of the evidence. Notwithstanding, both its source and the fact that experimental and clinical reports emphasize its close resemblance to opium and morphin, one author (H. Haymann, "Pantopon in der Psychiatrie," *Münch. med. Wchnschr.*, No. 43, 1910) remarks that a habit was not produced, inferring that something in the character of the preparation prevented the formation of such a habit.

The one thing to be kept in mind in considering the claims made in the literature for this preparation is that it represents opium and opium only and any statements of its superiority to opium must be read in the light of the well-known tendency of writers to exaggerate the virtues of proprietary substitutes for official substances.

PAPINE

A Disguised Morphin Solution

To the thinking physician it should be evident that a preparation containing morphin must possess not only all of the valuable properties of this drug, but also all of the objectionable ones. There are still some physicians, apparently, who give credence to the assertions of the manufacturers concerning a morphin preparation from which, it is claimed, all of the undesirable morphin effects have been removed. The following query from a correspondent illustrates this fact:

"Will you inform me as to the contents of "Papine"? I have a case of chronic interstitial nephritis, and my consultant insists on giving this preparation. I asked him if he knew what drugs it contained and his answer was 'one-eighth of a grain of morphin with the objectionable parts of the drug removed.'"

The query was referred to the Association Laboratory, which submitted the following report:

For many years Papine has been advertised by its makers, Battle & Company, St. Louis, as an anodyne. In the circulars Papine is described in part as follows:

"Papine represents in pharmaceutical form the purely anodyne principles of opium freed from the narcotic and tetanising constituents."

"Papine is the anodyne or pain-relieving principle of opium, the narcotic and convulsive elements being eliminated. One fluid drachm is equal in anodyne power to one-eighth grain of morphin."

"Through special methods of preparation, the anodyne and analgesic principles of *Papaver somniferum* are so extracted as to free them of the narcotic and convulsive elements that ever have been, and must ever continue to be serious objections to the use of opium and its common derivatives. . . . No demand is more regularly made on the physician than that for the relief of pain, and to be able to afford it promptly and completely, without the slightest deleterious action, is an advantage that cannot be overestimated."

"Unlike most derivatives and preparations of opium, Papine neither nauseates nor constipates; nor does it inhibit the secretory functions of the body."

"In conditions of extreme nervousness, especially in women, recourse to morphin is attended by the very real danger of the formation of a habit. Lastly, opium and its alkaloids must not be administered to persons whose kidneys are not in good working order on account of the risk of toxic accumulation."

"No such restriction exists in respect of Papine, its action being exerted exclusively on the element pain; in other words, it is purely anodyne."

"Papine does not nauseate, constipate nor create a habit."

From these statements the incautious physician might be led to infer that Papine is a preparation analogous or similar to the official tincture of deodorized opium. Formerly in the manufacture of the latter preparation, in addition to removal of the odorous substances, narcotin, then thought to be the principal convulsive alkaloid,[1] was also removed. By the process for the manufacture of this tincture, which is now official in the United States Pharmacopeia, most of the narcotine is found in the finished preparation. While it is a comparatively simple matter to remove the narcotin from opium and its preparations, thus eliminating most of the commonly reputed "convulsive elements,"[2] to remove the "narcotic elements" from opium would result in destroying the integrity of the product. The reasons for this are that morphin is the most powerfully narcotic substance found in opium, and it is present in the largest proportion of any of the alkaloidal constituents. Its removal from an opium preparation would, therefore, render that preparation practically valueless.

1. Narcotin is now known to possess very little physiologic effect.

2. Of the opium alkaloids, laudanin and thebain possess the most powerfully tetanizing properties, but they are present in opium in too small quantities to produce any noticeable effect. Neither of these alkaloids is removed by the usual processes for "denarcotizing" opium.

From Papine, however, the morphin has not been removed, for *since the passage of the Food and Drugs Act* the label has to admit that Papine contains 1 grain of morphin in each ounce!

A specimen of Papine was examined[3] and found to be nothing more than a simple aqueous-alcoholic solution of morphin, containing glycerin. The preparation is flavored to imitate cherry and colored with cochineal. With the exception of morphin, neither narcotin, codein nor other opianic alkaloids were found, while meconic acid, a characteristic constituent of opium, was absent. Since Papine is claimed not to cause constipation, and as is well known, this condition is frequently produced by morphin, it seemed possible that Papine might contain laxative substances. On examination, however, neither cascara, rhubarb, phenolphthalein nor laxative salts were found.

While Battle & Co. have persistently exploited Papine as being an opium preparation having none of the objectionable qualities of opium, the analysis shows that the paradoxical claims made for it cannot be substantiated. In prescribing morphin there is an abundance of official preparations to choose from, and there certainly is no necessity or excuse for resorting to the much more expensive and in no way superior Papine.

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3. DETAILS OF ANALYSIS: Papine is a dark purplish liquid having a cherry-like odor and a sweetish taste. The specimen examined had a specific gravity at $\frac{25°\ C.}{25°\ C.}$ of 1.0565.

Qualitative tests indicated the presence of morphin, ethyl alcohol, glycerin and cochineal. Small amounts of a chlorid and traces of a sulphate were present. Acetates, lactates and sugars were absent.

Opium Constituents.—From the claims made for the preparation by the manufacturer, it might possibly be inferred that Papine is similar to the official tincture of deodorized opium. Accordingly, tests were made for opianic alkaloids other than morphin and for meconic acid. A portion of the specimen was dealcoholized, diluted with water and shaken with ether. The solvent was washed with water and portions evaporated. The residue from one portion of the solvent was very small; it was taken up in a small quantity of diluted hydrochloric acid and the solution filtered. On the addition of bromin to this solution, no precipitation took place, and on subsequent boiling the solution did not become rose-red. This was taken to indicate the absence of narcotin in Papine. The portion of dealcoholized Papine which had been shaken with ether was made alkaline with ammonia water and the mixture shaken with ether. The solvent was washed with water and shaken with diluted hydrochloric acid. The acid solution was made alkaline with ammonia, shaken with chloroform and the solvent evaporated. Only a very slight residue remained. This was subjected to the usual tests for codein, but with negative results.

A portion of the dealcoholized Papine was slightly acidified with hydrochloric acid and shaken with ether. The washed solvent was evaporated, the residue taken up with water and the solution treated with a drop of diluted ferric chlorid test solution. A red color was not produced. A portion of dealcoholized Papine was treated with a slight excess of lead acetate test solution, the precipitate washed with water, suspended in water and hydrogen sulphid passed in. The precipitated lead sulphid was removed by infiltration, the filtrate evaporated to a small bulk and treated with ferric chlorid test solution. No red color was produced. These tests indicated the absence of meconic acid. No odor similar to opium was observed at any stage of the examination.

As a check an aqueous extract of opium was prepared and subjected to the tests above described. A positive result was obtained in each case.

Laxative Substances.—A portion of the dealcoholized Papine was acidified with hydrochloric acid and shaken with ether. The washed solvent gave no red coloration on addition of ammonia water (absence of emodin and phenolphthalein). A small portion of the material was ignited. Only a trace of ash was given (absence of Epsom salts, Glauber's salt, etc.) These tests were taken to indicate the absence of the more common laxative substances.

Cochineal.—A portion of the dealcoholized specimen was slightly acidified with acetic acid shaken with amyl-alcohol, the solvent washed with water and shaken with a 1 per cent. solution of uranium nitrate. A deep green color was produced at once.

Chlorid.—Chlorid was determined as follows: Fifty c.c. were dealcoholized, diluted with 200 c.c. water, 10 c.c. nitric acid added, chlorid precipitated with silver nitrate, the precipitate collected, washed, dried, heated and weighed in the usual way. The results were calculated to crystallized morphin hydrochlorid ($C_{17}H_{19}NO_3$. $HCl + 3H_2O$) and to the equivalent of this salt in crystallized morphin ($C_{17}H_{19}NO_3 + H_2O$). From 50 c.c. of the solution 0.487 gm. silver chlorid was obtained; from a duplicate of 50 c.c. of the solution 0.481 gm. silver chlorid was obtained; average, 0.484 gm. silver chlorid. This is equivalent to 0.0968 gm. silver chlorid from each 100 c.c. of solution, or the equivalent of 0.2536 gm. crystallized morphin hydrochlorid in each 100 c.c. This quantity is equivalent to about 1.15 grain morphin hydrochlorid in each fluid ounce, or about 0.93 grain of crystallized morphin in each fluid ounce.

Since the label states that Papine contains 1 grain of morphin in each ounce, the findings from the chlorin determinations were taken to indicate that the morphin is present in the preparation combined as hydrochlorid.

Miscellany

Increase of Pay for Officers of the Public Health Service

Senator Owen has introduced the following bill, which appears on the Senate Calendar as S. 1182.. It has been referred to the Committee on Public Health and National Quarantine:

A bill to promote the efficiency of the Public Health and Marine-Hospital Service.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the salary of the surgeon-general of the Public Health and Marine-Hospital Service shall be $6,000 per annum, and the salary of the assistant surgeon-general shall be $500 in addition to the pay and allowances of his grade; for the ten senior surgeons on the active list, $3,500; for surgeons, $3,000; for passed assistant surgeons, $2,400; for assistant surgeons, $2,000; and the longevity pay and allowances of the said commissioned medical officers shall be the same as now provided by law: *Provided,* That the retirement of the commissioned medical officers shall be the same as is now provided for medical officers of the Navy.

Another personnel bill has been introduced into the House of Representatives by Mr. Edwards. It appears on the House calendar as H. R. 5599, and is as follows:

A bill to promote the efficiency of the Public Health and Marine-Hospital Service.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That hereafter the salaries of the commissioned medical officers of the Public Health and Marine-Hospital Service of the United States shall be at the following rates per annum: surgeon-general, $6,000; assistant surgeon-general, $4,000; senior surgeon, in which grade there shall be ten in number on active duty, $3,500; surgeon, $3,000; passed assistant surgeon, $2,500; assistant surgeon $2,000; and the said officers, excepting the surgeon-general, shall receive an additional compensation of 10 per cent. of the annual salary as above set forth for each five years' service, but not to exceed in all 40 per cent.: *Provided,* That the total salary, including longevity increase, shall not exceed the following rates: assistant surgeon-general, $5,000; senior surgeon, $4,500; surgeon, $4,000.

When officers on active duty are not provided quarters, fuel and lights, they shall receive the same commutation therefor as now allowed medical officers of similar grades in the Navy: *Provided,* That officers while serving outside the boundaries of the continental United States shall receive an additional 10 per cent. of their salaries and increase while on such duty.

The allowance for baggage and personal effects to an officer in changing stations shall be fixed by the Secretary of the Treasury, not to exceed in any case 7,200 pounds.

Vacancies in the grade of senior surgeon shall be filled by promotion, after satisfactory examination, from the grade of surgeon and in the order of seniority of said grade; passed assistant surgeons shall be promoted to the grade of surgeon in the order of seniority at the expiration of twelve years' commissioned service and after satisfactory examination; assistant surgeons shall be promoted to the grade of passed assistant surgeon in order of seniority at the expiration of three years' commissioned service and after satisfactory examination.

Treatment of Gonorrhea.—N. E. Aronstam discusses the treatment of this disease as follows: The abortive plan of treatment is both painful and inefficient. To determine its value the microscope must be always consulted. There is no specific treatment for gonococcic urethritis and some of the much-lauded remedies are worthless, to say the least. Mechanical means, such as injections and irrigations, are apt to injure the urethral mucosa and cause extension of the gonorrheal process. The modern silver preparations, although efficacious and prompt in a number of cases in checking the purulent discharge, are not entirely devoid of danger, as complications are prone to develop in the course of such treatment. Rest is of paramount importance in the treatment of gonorrhea. Gonorrhea must always be regarded as a grave and far-reaching affection. The expectant plan of treatment, although not so prompt as the more rigid aggressive methods, is, however, devoid of all danger and the possibility of complications.—*Detroit Medical Journal.*

Correspondence

Prevention of Pulmonary Tuberculosis

To the Editor:—In THE JOURNAL, April 22, 1911, page 1195, among "points which must not be forgotten," I should have been much gratified if you had mentioned the great importance of wearing a perforated zinc inhaler with suitable inhaling fluids, the best of these being equal parts of creosote, alcohol and spirits of chloroform. By the continuous and proper use of this fluid much can be effected in the way of prevention of the disease, not to speak of its very great value as a curative measure. To-day it is sad to note how little is done beyond mere sanitary regulations and hygienic régime to arrest the disease and cure an immense number of sufferers from tuberculosis; and practically nothing else is done to shield an equally large number of people from contracting the disease. For many years I have advocated strongly and frequently the value and importance of continuous antiseptic inhalations in pulmonary tuberculosis as a curative measure. I am equally impressed with its urgency as a protective measure, and especially with a vast majority who cannot go to sanatoriums or get the comforts and surroundings which wealth alone gives.

BEVERLEY ROBINSON, New York.

Hexamethylenamin in Pellagra

To the Editor:—In THE JOURNAL, Nov. 5, 1910, p. 1663, I reported a case of pellagra in which I treated the patient with hexamethylenamin. I stated results of the treatment, which were remarkable, although I had given the patient this treatment only a short time. The patient has continued to improve until she now feels perfectly well. By Christmas she had gained 40 pounds in weight, which she has held until the present time. When I began to treat her, I gave 45 grs. of hexamethylenamin every day for three weeks; then 30 grs. a day for one month. On account of the irritating effects on the bladder, I had to discontinue the drug only a few days during this time. During the winter and spring she has been taking 30 grs. a day for three days and missing three days. This is the only treatment she has taken since she has been under my care.

While one case proves nothing, yet the result in this case is so much better than any I have ever read of that I feel that I should report it. I hope that others, who have a number of cases, may try it.

B. B. BAGBY, M.D., West Point, Va.

Overcrowding in the Medical Profession in the West

To the Editor:—It might not be out of place to utter a caution to medical men contemplating settlement in the West. On account of the heavy expense incident thereto, any physician contemplating removal to the West should, if possible, make a trip first and look into matters closely before deciding.

The entire western country is very much congested with physicians of all kinds, and many of them, after spending a year or two in any of the western cities, will find their savings gone in the high cost of living and extortionate rents.

It must be remembered that many medical students in the West are constantly preparing to enter the profession in sufficient numbers to meet the demands of the increasing population.

DAVID H. LEWIS, Salt Lake City.

The Round-Ligament Operation

To the Editor:—In a recent issue of THE JOURNAL (Feb. 18, 1911, p. 481) is an article by Dr. J. M. Baldy entitled "Operation for Retrodisplacement of the Uterus." I desire to point out that the procedure described is exactly that which was first published by me in THE JOURNAL (Oct. 5, 1901).

I am highly gratified that Dr. Baldy advocates the operation so strongly in his paper; but, though he refers to "Webster, who has for the same length of time performed an operation with exactly the same principles"—his description is of such a character as to be very liable to give readers the impression that the operation is Dr. Baldy's invention.

This is not the first paper by him in which there is danger of similar misunderstanding. In the *New York Medical Journal* (April 14, 1906, p. 741), the same operation was described without the slightest reference to my share in originating it. I now consider that it is time to point out what Dr. Baldy has really done and to correct some misrepresentations.

In his recent paper the following sentences occur: "The operation is not new. I first referred to it in a paper in 1902." These statements are incorrect.

The operation was originally descrioed by me in THE JOURNAL, Oct. 5, 1901, its essential features consisting in perforation of the broad ligaments, seizing the round ligaments with forceps and drawing them double under the utero-ovarian ligaments, and stitching them to the back of the uterus.

In Dr. Baldy's first paper (*Am. Jour. Obst.*, May, 1902, p. 650), seven months later, he commends the principle of my operation, criticizes my method of doubling back the round ligaments and there describes his own procedure, which he regards as an improvement, viz., *dividing the round ligaments close to the uterus and drawing them through the broad ligaments attaching them to the posterior surface of the uterus.*

Here, then, in clear language is Dr. Baldy's first published account.

I may say, in passing, that I carried out this procedure in a few cases several years ago, but abandoned it as unnecessary. Moreover, there is more liability to intestinal adhesions in connection with it, as some raw edges are apt to be left exposed.

Four years later Dr. Baldy published an article in the *New York Medical Journal* (April 14, 1906, p. 741) of a somewhat amazing character. I quote his own account:

"The operation which I am in the habit of performing for backward displacements of the uterus, and which is frequently designated *by my name*, is one which obtains its result through the use of the round ligaments. The broad ligaments are perforated from their posterior surface by forceps which, on emerging on the anterior surface, are made to grasp the round ligaments, which are then drawn through to the posterior surface with the forceps. The round ligaments are brought together and sutured both together and to the uterus. One who has not seen the result (of this operation) can have no conception of its completeness." Here is evidence of a complete change in the author's practice.

The operation which he lauds so highly is the very one which was described by me in 1901 and which was discarded by him in 1902. He has described my procedure as his own and has not even mentioned my name in the entire paper.

Again in 1909 (*Ann. Gynec. and Pediat.*, May, 1909, pp. 142-146) he describes the operation without any reference to me.

It is not pleasant to me to carry a grievance into print but I cannot remain silent while another claims credit which is not his due. My operation has been described as Dr. Baldy's in a foreign work by Hartmann of Paris, and I consider it time to interfere lest further misrepresentations should appear in medical literature. Moreover, I desire to make it clear that Dr. Baldy, having acknowledged the importance of the principle introduced by me in the surgical treatment of retrodisplacements, criticized my method of operation and recommended another procedure of obtaining the same result. He then abandoned the latter and after four years redescribed my original operation, praising it highly but giving me no credit for it. This line has been followed by Dr. Baldy in other papers to which I have referred, until the impression has been created in various quarters that he is the originator of the procedure.

J. CLARENCE WEBSTER, M.D., Chicago.

[This letter was referred to Dr. Baldy, who replies as follows:]

To the Editor:—A careful reading of Dr. Webster's letter will fail to elicit any false statement which he attributes to me. He makes a statement which is directly contrary to fact when he says that I have ever claimed priority, directly

or indirectly. He quotes from two of my papers in which I give him full credit but, with apparent intention, he omits to say so, and he quotes an unimportant paper in which his name does not appear as proof of his claim that I pretend to priority. Dr. Webster seems to feel that the operation I described in 1902 is not the same as the one I am now doing. The operation which I described in 1902 consisted in "dividing the round ligaments close to the uterus, and drawing them through the broad ligaments attaching them to the posterior surface of the uterus." What I do now is to draw the round ligaments through the broad ligaments without cutting them, attaching them to each other, and, incidentally only, to the posterior surface of the uterus. Dr. Webster, so far as I can learn from those who have seen him operate, draws the round ligaments through the broad ligaments without cutting them, and attaches them to the posterior surface of the uterus. The principle of these three procedures is the same, and as Dr. Webster gives me credit for the first one, then I claim absolute credit for the second one, the one I am now doing and have done for some years. I have never seen it described by him nor has anyone who has seen him do the operation told me that he does it as I do it. The third method only is his; I claim the other two.

He brings the round ligaments through the broad ligaments, spreads them out over the posterior cornu of the uterus, and stitches them to the uterus, making the full support depend on the suture in the uterus. He does not bring the ends of the ligaments together posteriorly and stitch them together, as I do. Bringing the ends of the ligaments together and stitching them by my present method, makes the whole integrity of the operation depend on the juncture of the ligaments, and the stitch holding the ligament to the uterus is a mere incident, and could be left out.

The method he follows to-day is exactly like my original method, less one fact that I severed the round ligaments and he does not. The method I follow to-day is in no respect like his, except that I no longer sever the round ligaments, but bring them through double, as he does. In other words, his present method is as much like my original one as my present method is like his. If I have appropriated from him for this, so also has he appropriated from me. The truth is that he has modified his details, and I have modified mine. He has adopted as much of mine, as I have of his.

I reiterate most emphatically there is not an iota of difference in principle between what he has been doing for years and what I have been doing for the same length of time, the details of technic are unimportant in the issue, and I have as much right to them as he has, whether he has used them or not.

This brings me to the question of my right to have a hand in the development of this achievement. His first article appeared Oct. 5, 1901. My first paper was read before the Section of Gynecology, College of Physicians of Philadelphia, Feb. 20, 1902. This is an interval of more nearly four months than seven (apparently another deliberate misstatement of his); therefore our original papers were essentially produced at one and the same time, and it can hardly be doubted but that we had, both of us, been working at the subject for a long time beforehand, a thing which has occurred often with different men in different parts of the world.

As for my having withheld credit from him for his work, this is a misrepresentation which certainly seems to be a deliberate one. During all these years I have written exactly three papers of importance dealing directly with this operation. In each of these, I have given full credit to Dr. Webster.

In my original paper, in the *American Journal of Obstetrics and Diseases of Women and Children*, xlv, No. 5, 1902, I discuss in full, using his name, the merits and demerits of both procedures. I go even further in this: I held my paper up for a month after writing it in order to write Dr. Webster, and I added the final paragraph of the paper, giving him additional credit for the contents of his letter. If I take credit for that month, there was in reality only three months between the publications of our work.

My second important publication is found in *Surgery, Gynecology and Obstetrics*, Chicago, April, 1909, pp. 421-434. In this paper I state: "The mechanism is plain, but has never to my knowledge, been fully appreciated or fully pointed out even by Webster, who has, for the same length of time, performed an operation with exactly the same principles, but varying slightly in technic."

In my third important publication on this operation, in THE JOURNAL of the American Medical Association, Feb. 18, 1911, I repeat this statement.

In addition to all this, for years it has been my invariable custom in my lectures at the Philadelphia Polyclinic always to mention the name of Dr. J. Clarence Webster in connection with the operation and to give him full credit. Hundreds of men can readily bear witness to this fact. What has been his treatment of me in all these years? He has never once mentioned my name in connection with this procedure except to abuse me.

The sum total of his charge is that the operation I did originally is entirely different from the one he did. This I deny emphatically. The principle of each is precisely the same. He charges that I claim, and have claimed, priority to this principle, directly or indirectly. I have clearly shown that I do not, and never have claimed priority, but have always given him equal and due credit.

I, however, have, and do claim, that I evolved the principles of the operation at or about the same time as Dr. Webster, and I claim the right to go ahead, and develop that principle in all its details, irrespective of what rights he thinks he has in the premises.

J. M. BALDY, Philadelphia.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

CAUSE OF CONVULSIONS IN INFANTS

To the Editor:—At a recent meeting of our county society the cause of convulsions in a breast-fed infant of six months was discussed. As etiologic factors the following were mentioned: gastro-intestinal disturbances, adherent clitoris or prepuce, worms, especially roundworms, etc. The question as to what were the common causes of convulsions in infants was discussed, especially the possibility of round-worms being an etiologic factor. What are the possibilities of *Ascaris lumbricoides* causing convulsions in infants, and how frequently are they found in breast-fed infants?

A. Z., Iola, Kan.

ANSWER:—Convulsions in infancy are of three kinds: (1) those due to organic changes in the brain, meninges or skull; (2) those due to epilepsy; (3) those due to tetany. Practically all the so-called reflex convulsions—the convulsions at the onset of acute infections, during the course of gastro-intestinal disturbances—are dependent essentially on a chronic hypersensitive condition of the central nervous system as manifested by electrical and mechanical reactions, and with a tendency toward convulsions, laryngismus stridulus and carpopedal spasms. The two commonest names for this group are spasmophilic diathesis and tetany. The tendency to convulsions is manifest before the actual convulsions occur (latent tetany), and by electric examination one can foretell in a large percentage of cases which infants will tend to have convulsions at the onset of an acute illness.

The cardinal symptoms of tetany are: 1. Erb's phenomenon: This is the response of the motor nerves to minute galvanic currents. Pathognomonic for tetany and most important especially in the latent cases, because it may be the only sign present, is the cathodal opening contraction with a current of less than 5 milliamperes. 2. Chvostek's sign: By tapping the facial nerve a contraction occurs in the muscles of the face supplied by that nerve. 3. In the more severe cases tapping the muscles will produce a contraction; this is best seen by tapping the extensors of the leg. 4. Trousseau's sign: By constriction of the upper left arm the hand will take on the obstetric position; the hand will be flexed at the wrist and the forearm flexed at the elbow.

Thus by electric examination one can determine whether a case belongs in Group 3 or in Group 1 or 2. Almost constantly associated with tetany are more or less marked evidences of rachitis, and it is supposed that both depend on a common error in the metabolism, especially of the calcium salts.

The question of roundworms causing convulsions during the first six months of life of a breast-fed infant is one that can be answered in the negative. Practically all breast-fed children are guarded against the possibility of infection with roundworms, that is, taking the worm larvæ in their food, or by playing on the ground getting the larvæ in their fingers and carrying them thence to their mouth. Recent experiments have shown that from the roundworm toxins can be obtained that act markedly in the gastro-intestinal tract and nervous system. The belief that convulsions occur as the result solely of worms is becoming rarer as the true causes of convulsions are becoming known.

JELLYFISH STINGS

To the Editor:—I have read with much interest your notes on jellyfish sting and am struck by the fact that, although apparently *Physalia* is sometimes a very active poisoning agent, as it is found in our latitude it seems to have lost most of its virulence. On three or four occasions in the last twenty years I have captured a *Physalia* off Newport, R. I., and, though always stung quite unpleasantly, I never found it necessary to resort to any treatment; nor did my father, who has an exceptionally tender skin.

MALCOLM STORER, M.D., Boston.

To the Editor:—In connection with the article on sting of Portuguese man-of-war published in THE JOURNAL, April 22, I would refer you to the adventure of the celebrated Captain John Smith of Virginia with a sting-ray as given in Smith's own history of Virginia.

JESSE EWELL, M.D., Ruckersville, Va.

SLANDERING THE FLEA

To the Editor:—It is a curious coincidence that the leading German weekly, the *Deutsche med. Wochenschrift*, makes the same mistake that THE JOURNAL did (April 8, page 1073) in its abstract of Nicolle's work on typhus. [Corrected April 22, page 1236.]

The German *Wochenschrift* states in its abstract of Nicolle's work, April 6, page 657, that *Flöhe*, "fleas," are involved in the transmission of the disease. What can there be in Nicolle's article that hypnotizes reviewers into mistaking lice for fleas? It is to be hoped that the Flea family will not take revenge on the reviewers for this baseless calumny! At the same time, as the darkey said afterward when his minister had accused him of having stolen some chickens and he was able indignantly to deny the accusation, "If he had said ducks he would have got me."

S.

FILTER WANTED FOR CISTERN

To the Editor:—Please tell me how to construct or where to buy a cheap but effective filter for water running off a roof into a cistern. The water will be used for drinking purposes.

PAUL D. ESPEY, Port William, Ohio.

The Public Service

Medical Department, U. S. Army

Changes for the week ended April 22, 1911.

Williamson, L. P., lieut., left Hachita, N. M., with Co. I, Signal Corps, en route to San Antonio, Texas.

Gosman, George H. R., major, orders directing him to proceed to the Philippine Islands for duty revoked.

Bernheim, J. R., D.S., left San Francisco on two months' leave of absence.

Ingalls, R. E., D. S., ordered to proceed from Fort Douglas, Utah, to Fort Huachuca, Ariz., for temporary duty.

Hewitt, John M., M.R.C., relieved from duty at U. S. military prison, Fort Leavenworth, Kan., and assigned to duty on the transport *Dix*, relieving First Lieutenant James B. Ferguson, Medical Reserve Corps.

Griffis, Frank C., M.R.C., relieved from duty at Fort D. A. Russell, Wyo., and ordered to Henry Barracks, Porto Rico, for duty, relieving First Lieutenant Thomas M. Foley, Medical Reserve Corps, who will proceed to New York City for further orders.

Porter, Ralph S., captain, relieved from duty at Army General Hospital, Fort Bayard, N. M., and ordered to Fort William H. Seward, Ala., for duty, relieving Captain Fred W. Palmer, Medical Corps, who will proceed to Seattle, Wash., for further orders.

McAlister, John A., Jr., D.S., will proceed to San Antonio, Texas, for duty with maneuver division.

Cutliffe, William O., M.R.C., relieved from treatment at Walter Reed General Hospital, Takoma Park, D. C., and will return to his station.

Hill, Eben C., lieut., ordered to Walter Reed General Hospital, Takoma Park, D. C., for observation and treatment.

McAlister, John A., Jr., granted leave of absence for ten days.

Brownlee, C. Y., major, left Fort Des Moines, Iowa, with the 1st Squadron, 6th Cavalry, en route to Douglas, Ariz., for duty.

Wing, F. F., D.S., returned to Fort D. A. Russell, Wyo., for temporary duty.

Worthington, J. A., lieut., reports assignment to temporary duty at Fort Riley, Kan.

Austin, Thomas C., lieut., ordered to sail for duty in the Philippine Islands, about August 5, instead of June 5, 1911.

Medical Corps, U. S. Navy

Changes during the week ended April 22, 1911.

Robnett, A. H., P. A. surgeon, detached from the marine corps rifle range, Winthrop, Md., and ordered to temporary duty at the naval hospital, Boston, and to duty on board the *New Jersey* when placed in commission.

Woods, E. L., P. A. surgeon, detached from the naval hospital, Annapolis, Md., and ordered to duty with the United States legation guard, Peking, China.

Owens, W. D., P. A. surgeon, detached from duty with the United States legation guard, Peking, China, and ordered home to await orders.

Boyd, J. C., medical director, transferred to the retired list from June 1, 1911.

U. S. Public Health and Marine-Hospital Service

Changes for the seven days ended April 19, 1911.

Stimpson, W. G., surgeon, granted seven days' leave of absence from April 18, 1911, under paragraph 189, Service Regulations.

Nydegger, J. A., surgeon, granted one month's leave of absence from March 24, 1911, on account of sickness.

Wickes, H. W., surgeon, granted seven days' leave of absence from April 22, 1911.

Bryan, W. M., asst. surgeon, directed to report to the chairman of board of medical officers at Washington, D. C., April 24, 1911, for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

Krulish, E., asst. surgeon, directed to report to the chairman of board of medical officers at Washington, D. C., April 24, 1911, for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

Jones, O. E., A. A. surgeon, granted thirty days' leave of absence from April 20, 1911.

Walker, W. S., A. A. surgeon, granted seven days' leave of absence from April 13, 1911.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POST-GRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

PROGRESS IN STATE LEGISLATURES

ALABAMA

The governor has vetoed the optometry bill which passed the legislature under a misunderstanding of its provisions. The Justice bill, to amend the state medical practice act, is still before the legislature.

ARKANSAS

The state board of health bill has passed the senate.

COLORADO

The Sharpley bill (S. 63), to amend the medical practice act, has passed the senate. The Hasty bill, to require physicians to report all cases of tuberculosis and landlords to report all tuberculous tenants to the health officials, has passed the house.

ILLINOIS

H. B. 493, to provide for the registration of births and deaths, has been referred to the committee on sanitary affairs. This bill is modeled largely after the vital statistics bill drafted by the committee on medical legislation of the American Medical Association. The occupational disease bill passed the house by a vote of 105 to 1. This bill was drafted by a special commission appointed by the governor to investigate conditions in manufacturing establishments where poisonous materials were used, and is intended to protect employees in occupations that subject them to illnesses and diseases incidental to their work. The optometry and osteopathic bills in the senate and house are still in committee.

INDIANA

The McCarty bill, to provide for medical inspection of school children, has passed the house.

IOWA

The osteopathic bill has been killed in the committee on judiciary. A bill introduced by Representative Miller, of Bremer County, to prohibit physicians and surgeons from entering into agreements regarding fees, was defeated in the house by a vote of 22 to 37. A bill to create a commission to investigate the causes of insanity, epilepsy, mental deficiency, delinquency and criminality has passed the house. A bill to provide for the sterilization of habitual criminals, imbeciles, idiots and feeble-minded persons confined in state institutions, has passed both houses.

MAINE

The osteopathic bill has been defeated by a small margin in the senate and by an overwhelming majority in the house. A bill designed to prevent physicians from carrying insurance against malpractice suits has also been defeated.

MICHIGAN

A chiropractic bill has failed to pass. A bill to amend the medical practice act has been withdrawn. A bill to require parties to a marriage contract to furnish a physician's certificate of good health before obtaining a license passed the house by a vote of 57 to 29. A bill which, according to the Bay City (Mich.) *Tribune*, is believed to emanate from the Antivivisection Society of New York, has been introduced; it provides that one-half hour every week be devoted in all the schools of the state to humane education. A bill to require local boards of health to report the effect of occupations on persons subject to tuberculosis has been signed by Governor Osborn. A bill to abolish the common drinking cups in all railroad cars except Pullmans, has passed the senate.

MINNESOTA

S. B. 787 to reduce the requirements for examination for physicians, has been withdrawn. A bill to require a license fee of $500 from Christian Scientists has been "definitely postponed."

MISSOURI

A bill authorizing the formation of districts for the prevention of tuberculosis has passed both houses of the legislature. It is understood that this bill has the personal endorsement of Governor Hadley. A commission appointed by the governor reports that there are between 6,000 and 7,000 cases of tuberculosis of the lungs in Missouri and that infection is transmitted through lack of proper care and precaution. The bill permits of the organization of districts throughout the state to avoid the further spread of the disease and to provide proper care and treatment for those already afflicted.

TENNESSEE

A vital statistics bill and a bill to amend the medical practice act have been introduced, also one providing for the medical inspection of school children. Another bill requires a health certificate as a condition for a marriage license. Through the efforts of the Tennessee Federation of Women's Clubs, a bill providing for the protection of the eyesight of new-born infants, has passed both houses of the legislature and has been signed by the governor. An amendment to the present excellent pure food and drug law, a sanitary hotel bill, an itinerant venders bill and a state hygienic laboratory bill have also been introduced.

NEW JERSEY

A bill to provide for the registration of trained nurses has been introduced, also a bill to amend the existing medical practice act.

NORTH CAROLINA

The legislature has adjourned after increasing the appropriation for public health from $8,000 to $22,000 and giving the state board of health an additional $5,000 to investigate the water-supply. A school for the feeble-minded has been established. A bill to permit the shipment of bodies from this state to other states for the purpose of anatomic work, has become a law. The legislature refused to appropriate $3,000 for free diphtheria antitoxin but appropriated $2,000 for the free treatment of hog cholera. A bill was passed allowing West Asheville to incorporate itself as a sanitary district and to vote a special tax by which to raise sufficient revenue for sanitary work, such work to be carried out by a commission under the direction of the county and state boards of health. It is hoped at the next session of the legislature to extend this privilege to all parts of the state so that any community county desiring may form a sanitary district to raise funds for public health work.

NORTH DAKOTA

H. B. 436 to require licenses of all hospitals and sanitariums and restricting major surgical operations, has been vetoed by the governor.

PENNSYLVANIA

A number of bills to amend the existing medical practice act have been introduced but none has as yet been passed. An antivivisection bill is in the house committee on public health and sanitation.

UTAH

Bills providing for reporting of contagious diseases by physicians and hotel and lodging-house keepers and reporting of inflammation of the eyes of new-born infants, have passed the house.

WISCONSIN

A bill to provide for medical inspection of school children is before the legislature and has been opposed by the Christian Science members of the National League of Medical Freedom.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Tenth Month—First Weekly Meeting

General Subject for the Month: Legal Medicine

SIGNS OF DEATH

SOMATIC DEATH, MOLECULAR DEATH.

CESSATION OF RESPIRATION: Auscultation, mirror to mouth, dish of water on chest, etc. Time.

CESSATION OF CIRCULATION: Relation to respiration, tests. Eye changes. Changes in body temperature. Rigor mortis. Changes in skin.

RIGOR MORTIS AND PUTREFACTION: Rigor mortis, onset, duration, causes. Effect of disease, violence, age.

PUTREFACTION: Onset, effect of moisture and temperature, bacteria, air, earth, and cause of death. Adipocere. Mode of decomposition of structures and viscera. Determination of time of death.

CAUSES OF SUDDEN DEATH

SUDDEN DEATH DUE TO NATURAL CAUSES

HEART DISEASE: Cardiac thrombosis and embolism, myocarditis, rupture of heart, coronary disease, valvular lesions, aortic aneurysm.

BRAIN LESIONS: Hemorrhages, embolism, thrombosis, in epilepsy.

LESIONS OF RESPIRATORY ORGANS: Embolism, thrombosis, hemoptysis, pneumonia.

HEMORRHAGIC PANCREATITIS.

ECTOPIC PREGNANCY.

REFERENCE BOOKS FOR THE TENTH MONTH

Draper: Legal Medicine.
Emerson. Legal Medicine.
Taylor: Medical Jurisprudence.
Wharton and Stille: Medical Jurisprudence.
Reese: Medical Jurisprudence and Toxicology.
Whitthaus and Becker: Medical Jurisprudence.
Peterson and Haines: Legal Medicine and Toxicology.
Hamilton and Godkin: Legal Medicine.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Los Angeles, June 27-30.

Am. Assn. Genito-Urinary Surgeons, New York, May 1-3.
American Dermatological Association, Boston, May 25-27.
American Gynecological Society, Atlantic City, May 23-25.
American Laryngological Association, Philadelphia, May 29-31.
American Neurological Association, Baltimore, May 11-13.
American Orthopedic Association, Cincinnati, May 15-17.
American Pediatric Society, Lake Mohonk, May 31-June 2.
American Society of Tropical Medicine, New Orleans, May 18-19.
American Therapeutic Society, Boston, May 11-13.
Arizona Medical Association, Bisbee, May 2-5.
Arkansas Medical Society, Fort Smith, May 2-5.
Association of American Physicians, Atlantic City, May 9-10.
Connecticut State Medical Society, Hartford, May 24-25.
Florida Medical Association, Tallahassee, May 10.
Illinois State Medical Society, Aurora, May 16-18.
Iowa State Medical Society, Des Moines, May 17-19.
Kansas Medical Society, Kansas City, May 3-5.
Louisiana State Medical Society, Shreveport, May 30-June 1.
Missouri State Medical Association, Jefferson City, May 16-18.
Montana State Medical Association, Butte, May 10-11.
Nebraska State Medical Association, Omaha, May 2.
New Hampshire Medical Society, Concord, May 11-12.
North Dakota State Medical Association, Fargo, May 9-10.
Ohio State Medical Association, Cleveland, May 9-11.
Oklahoma State Medical Association, Muskogee, May 9-11.
Texas, State Medical Association of, Amarillo, May 9-11.
Washington State Medical Association, Spokane, May 9-11.

MEDICAL SOCIETY OF THE STATE OF NEW YORK

One Hundred and Fifth Annual Meeting, held at Albany, April 18-19, 1911

The President, DR. CHARLES STOVER, Amsterdam, in the Chair

PROCEEDINGS OF THE HOUSE OF DELEGATES

DR. CHARLES STOVER, Amsterdam: The Committee on Experimental Medicine is asking for the pecuniary support of this society in carrying on the work entrusted to it, and should receive it. The report of the Committee on Public Health is of more than ordinary interest in that it deals with the importance of establishing and maintaining county laboratories. The funds necessary for carrying to a conclusion the work that has been begun in relation to tuberculosis alone are so great that, inasmuch as the benefit to the public is correspondingly large, there is no reason why boards of health should not take on themselves the continuation of a great deal of the work that has been begun by private fortunes. This has already been done in some of the cities of the state where boards of health have taken over tuberculosis dispensaries originally started by branches of the state charities aid.

Report of the Committee on Experimental Medicine

The Committee on Experimental Medicine, in cooperation with the Committee on Legislation and with public-spirited men throughout the state, labored successfully to prevent the passage by the legislature of 1910 of two bills relating to experiments on living animals. One bill sought to impose restrictions, which were against the public welfare, on the performance of such experiments. A joint hearing before the judiciary committee of the senate and the assembly was held on Feb. 23, 1910. The other bill represented a new departure on the part of antivivisectionists in that it sought to establish a commission to inquire into the extent and nature of animal experimentation in this state. It was a real antivivisection measure thinly disguised. Hearings on this bill were held before the ways and means committee of the assembly and before the finance committee of the senate. The Committee on Experimental Medicine felt it to be its duty to combat the mistaken and unsound notions of their opponents relating to experimental medicine, and to oppose both bills, and its representatives appeared at the hearings and presented arguments to this effect before the legislative committees. Both bills died in committee. There is no doubt that again and again, with each succeeding year, this contest will be renewed; at least, so long as the funds provided for the purpose, and a willingness to regard experimental workers as unworthy of belief in the matter of their operative technic, continue. Every member of the profession should regard this controversy as a personal one, since the results affect all alike so far as the prevention and cure of disease are concerned.

Report of the Counsel

MR. JAMES TAYLOR LEWIS, counsel for the society, reported on Medical Defense. Seventeen state societies have now adopted this feature, and the medical profession is fast coming to realize how important it is that its members should stand shoulder to shoulder in repelling vicious attacks on physicians, since there is no litigation more far-reaching in its importance, not only in its effect on the profession, but also by its indirect influence on the public health.

Report of the Committee on Public Health

While those colleagues who reside in large cities have every opportunity and facility in laboratory advantages, others in the smaller towns and villages do not, and the committee believes them to be entitled to every and any aid which can be given to them. These men stand in the front rank of earnest, honest, hard-working, self-sacrificing members of the medical profession, and they should not be denied these advantages simply because of their environment. Such laboratory facilities would not only enable county medical men to keep modern, but would exert a profound and lasting influence over the public at large. It is assumed that the thirty-eight counties in the state containing hospitals would be glad to furnish laboratory space for the *quid pro quo* of the paid resident pathologist and his assistant.

Report of Committee to Consider the Question of Increasing Interest in the Society

The fifty-eight county societies of the state represent at the present time a membership of about 7,000, and while there has been a steady growth each year, it is not large. If state, district branch, and county society meetings are improved, increased growth will necessarily follow. This committee offers the following suggestions for increasing interest in county societies:

1. Improve programs. Interest in the meeting depends largely on the attractiveness of the program.

2. Take up post-graduate course as recommended by American Medical Association. This systematizes the program.

3. Confer with state board of health for at least one meeting a year on public health matters. Cooperation with the health department is essential to the welfare of the community.

4. Have at least one speaker a year from a distance, obtained by conference with committee on scientific work of state society if necessary. It will be glad to suggest names of those willing to render such service.

5. Arrange for one or more clinical meetings a year. Select subjects and request all who have proper cases to bring them before the society. Then have a discussion, always with the understanding that discussion of the case shall not be held in the presence of the patient; otherwise, frequently patients cannot be shown for obvious reasons.

6. Arrange for demonstration by bacteriologists and pathologists, with specimens, lantern slides, etc.

7. Arrange for social part of meeting. Some light refreshments at the close of the meeting are an adjunct to fraternal intercourse.

8. See that meetings are held often enough to keep up interest. Once or twice a year is not enough. Invite every member of the profession in the county to at least one meeting a year, not necessarily inviting them all to the same meeting. In counties where men do not show a willingness to write papers either designate writers for different meetings or see that outsiders are invited. In other words, see that the meetings are made interesting. It should be the aim of every county society to secure a permanent home, a small library, with a supply of current journals, and the use of the larger libraries for reference books will greatly increase interest in the county organization.

9. Arrange the time of meeting to accommodate the largest number of members. When men come from long distances, an evening session is obviously the most inconvenient. An afternoon session will often appeal to a larger number of men when it permits them to reach their homes at a seasonable hour.

10. Select as officers men who are willing to work. Keep good men in office. Do not promote those who have shown that they will not attend to the duties assigned them. Efficiency is the only criterion of leadership. No physician should accept office unless he is prepared to give the position the attention that it deserves, and unless he is interested in the work.

11. In small societies do not unduly multiply offices—the secretary's and treasurer's duties can be best done by one man.

12. Make dues large enough to warrant conducting the society work in a proper manner.

13. Provide a committee on entertainment which shall welcome new or prospective members or guests at meetings. The officers of the society may be active or ex-officio members of such committee. Newly registered physicians should be visited by such committee or written to and asked to join the county society.

14. See that the meetings, programs of proceedings are published regularly and promptly in the state journal.

15. Have high ideals. Be liberal yet firm in the maintenance of a high ethical standard. Educate the public. Be a power for good in the community. Do not be ashamed of the county society or apologize for it. Make it better. Attend all meetings and see that others do the same. The county society is a conservator of patriotism and worthy citizenship.

Animal Experimentation

DR. CARR, of New York City, offered the following resolutions:

Resolved, That the members of the House of Delegates do hereby declare that animal experimentation in this state is conducted in a proper and merciful manner, and that such experimentation is positively essential to medical progress; that unmerciful experimentation is not practiced in this state and is prohibited by law.

Resolved, That Senate Bill No. 310, calling for the investigation of vivisection in this state is therefore unnecessary and mischevious and calculated to hinder and interfere with vivisection, and correspondingly lessen the humane benefits derived therefrom.

Resolved, That we respectfully petition the legislature to express decided disapproval of all measures coming before it opposed to animal experimentation for the purpose of medical advancement; also all measures calculated to hinder or destroy the same.

These resolutions were adopted unanimously.

Membership in State and National Organizations

DR. E. LEFEVRE, of New York, offered the following:

WHEREAS, The Board of Trustees of the American Medical Association has requested an expression of opinion on the subject of making in the future all members of state societies and county societies in affiliation with them *ipso facto* members of the American Medical Association, and in order that the board may make a satisfactory report to the House of Delegates of the national organization relating thereto, be it

Resolved, That the foregoing request of the Board of Trustees of the American Medical Association be referred to a committee of five, to be appointed by the president of this society for investigation as to the legality, expediency and advisability of the proposition, and to report to this House of Delegates at the next annual meeting.

On motion, the resolution was adopted.

The President appointed on this committee Drs. E. LeFevre, New York; S. B. Ward, Albany; W. W. Skinner, Geneva; J. C. MacEvitt, Brooklyn; and Wisner R. Townsend, New York.

Vaccination of School Children

DR. D. S. DOUGHERTY, of New York, offered the following resolution, which was adopted:

WHEREAS, There is a bill in the assembly known as Bill No. 611, designed to allow unvaccinated children to attend school on presentation of a physician's certificate that such pupil's or person's physical condition is such that vaccination will jeopardize his or her health, or on a written declaration from the parents or guardians of such pupils or persons to the effect that such parents or guardians are conscientiously opposed to vaccination; therefore, be it

Resolved, That this society protests against the passage of this act as inimical to the best interests of the state, and respectfully urges the legislature to withhold its approval of the measure.

Medical Education and Medical Practice Act

The following resolutions were adopted:

Resolved, That the Board of Regents of the University of the State of New York be requested to recommend such change in the medical practice act as will raise the requirements for securing the medical student's certificate to include, in addition to the standard high school course, one year in college, or its equivalent, embracing especially the following subjects: physics, chemistry (inorganic and qualitative analysis), and general biology.

Resolved, That the state society recommends to the Board of Regents that an investigation be conducted in order to ascertain the number of internships available in the hospitals of the state with a view to recommending a fifth year in hospital for the completion of the medical curriculum.

Registration of Midwives

DR. BERNARD COHEN, of Buffalo, offered the following resolution, which was referred to the council:

WHEREAS, In the larger cities in the State of New York nearly half of the births are attended by midwives, many of whom are wholly untrained for the responsible work which they assume, therefore, be it

Resolved, That the Erie County Medical Society favors the adoption of an educational standard similar in character to that which is now provided for trained nurses, and that it recommends the state medical society take such action as may lead to the establishment of a standard, the requirements of adequate examinations, with universal registration of all midwives practicing in this state.

Optometry

DR. H. W. WOOTTON, of New York City, presented the following preambles and resolutions, which were referred to the council with power to carry out the recommendations:

WHEREAS, A law is now on the statute books creating a special class of practitioners known as optometrists, and

WHEREAS, This law gives to certain persons the right to adjust lenses to eyes with defects of vision and prohibits the use of drugs in determining the need for and the kind of lenses to be prescribed, and

WHEREAS, It is the opinion of the medical profession that a knowledge of the subjects taught in medical schools is absolutely essential for the proper and safe performance of the work this law gives opticians the legal right to do, and

WHEREAS, The entrusting of work so important to the hands of a class of people inadequately equipped, and who are denied the right to use the means necessary to do properly the work they are authorized to do, is a positive menace to the community; therefore, be it

Resolved, That it is the judgment of the Medical Society of the State of New York that the legislature made a serious mistake in enacting this law; that in the judgment of this society the legislature should be respectfully petitioned to repeal this iniquitous law; that in the judgment of this society Columbia University has taken a decided step backward in establishing a course in optometry in its extension teaching, advertising the same as an opportunity for men and women with only two years of high-school training to enter a "new profession."

Resolved, That Columbia University by creating this department and granting certificates of proficiency to students who fulfil its requirements not only discredits its own medical department but discriminates against its medical graduates, of whom is required a preliminary training far in excess of that required of the optometrist, which discrimination is especially intensified by the fact that the medical graduates who take up the practice of ophthalmology come in direct competition with graduates in optometry.

Resolved, That Columbia University by establishing this course in optometry has given support to a horde of incompetents who are constantly endeavoring to tear down the barriers created by the state for the protection of the public health, as is attested by the fact that the action of Columbia University in this particular is being advertised all over the United States by opticians seeking identical privileges elsewhere.

Resolved, That in view of the foregoing statements the medical society of this state respectfully urges Columbia University, in the City of New York, to abolish its course in optometry.

Officers Elected

The following officers were elected: President, Dr. Wendell C. Phillips, New York City; first vice-president, Dr. Peter W. Van Peyma, Buffalo; second vice-president, Dr. William F. Campbell, Brooklyn; third vice-president, Dr. C. R. Hervey, Oswego; secretary, Dr. Wisner R. Townsend, New York City, re-elected; treasurer, Dr. Alexander Lambert, New York City, re-elected; delegates to American Medical Association: Dr. A. T. Bristow, Brooklyn, Dr. J. W. Fleming, Brooklyn, Dr. Wesley T. Mulligen, Rochester, Dr. Henry L. Elsner, Syracuse, Dr. Edgar A. VanderVeer, Albany, and Dr. E. E. Cornwall, Brooklyn; alternates, Dr. S. W. S. Toms, Nyack, Dr. A. Walter Suiter, Herkimer, Dr. W. B. Handbidge, Ogdensburg, Dr. J. C. MacEvitt, Brooklyn, Dr. W. W. Strang, New York City, and Dr. Otto Pfaff, Oneida.

Albany was selected as the place for holding the next annual meeting, and the time April 16-17, 1912.

(To be continued)

TENNESSEE STATE MEDICAL ASSOCIATION

Seventy-Eighth Annual Meeting, held at Nashville, April 11-13, 1911

The President, DR. JOHN A. WITHERSPOON, in the Chair

The officers elected were named in THE JOURNAL, April 22, in the News Department.

Radium

DR. G. P. EDWARDS, Nashville: In my experience, covering a period of nearly seven years, I have observed the action of radium in a great many different conditions and have gained confidence in its virtue. In thirty-eight cases of cancer of the lip, twelve of which were postoperative, there were thirty-one cures and six failures; one patient failed to report results. In seventy-six cases of cancer of the face, nine of which were postoperative, one patient failed to report, in one the radium failed, and seventy-four patients were cured. Eight recurrences yielded to treatment. In seventeen cases of cancer of the eyelids, nine involving the mucous margin, six the canthus, and two the skin, cures were effected. In eight cases of cancer of the breast there were three failures and five cures. In three cases of cancer of the nipple, there were one failure and two cures. In four cases of lupus vulgaris, all the patients were cured. Of seven patients with lupus erythematosus, six were cured. Of nine individuals with cancer involving the buccal spaces, gum, or mouth, six were cured. Three cases of cancer of the scalp terminated in recovery in all. Of two patients with cancer of the antrum, one recovered; of six with cancer in the nares, five recovered. In one case of cancer of the umbilicus a cure was effected, and also in thirteen cases of cancer of the neck. Six cases of cancer of the hand all resulted in cure. This report does not include patients now under treatment, nor does it include those cases in which the *x*-ray was used in conjunction with radium except when the radium was used subsequent to *x*-ray failure.

DISCUSSION

DR. G. C. SAVAGE, Nashville: I saw the case of malignant growth in the nasopharynx. The growth was removed, and it was one of the bloodiest operations I have ever seen. Radium treatment followed its removal, and the patient is now well at the end of eight or ten weeks. Another patient with sarcoma of the nasopharynx came under my observation, but was not operated on. Radium was used. There had been hemorrhage every day from the malignant growth, but under the use of radium by Dr. Edwards this patient is now fairly robust. There are no longer hemorrhages, and there is free use of the respiratory passages.

Significance and Surgical Treatment of Uterine Displacements

DR. R. M. MCCOWAN, Knoxville: In treatment of uterine displacements there are a few principles that appeal to me more strongly than others. These are: 1. The perineum must be looked on as the most important feature for consideration, for without perfect support here, anything one may do is futile. There are many operations that are suggested for repair of the perineum; I prefer the modified Tait. 2. Next in importance is the correction of the angle between the uterus and the vagina. This is accomplished by shortening the round ligaments, lifting the uterus forward and upward. When the anterior portion of the ligament is especially weak, I have found the modified Gilliam, Mayo and Fowler operation satisfactory. This consists in pulling the inguinal portion of the round ligaments through the outer border of the recti, and stitching them together on the anterior portion of the muscle. Another method which I have used for several years is one suggested first by S. M. Miller, of Knoxville. It consists in lifting the uterus upward and forward through an abdominal opening, until the round ligaments are brought into view; an incision is carried through the parietal covering along the long axis from the uterine end a variable distance toward the pelvic wall, in accordance with the relaxation present; the fibers of ligaments are then separated the length of the incision, and the halves, together with the attached peritoneal covering of broad ligaments, are drawn apart. The distal and proximal extremities are brought together by a suture passed through the tissues beneath the cuts from just beyond one extreme to the other. A single lateral suture on either side the central will close the incision in a transverse line and shorten the ligaments to the extent of the primary incision. In prolapse, the operation of selection is that suggested by Crile. It consists in tying off the ovarian arteries and in doing a supravaginal hysterectomy, leaving a long fan-tail leaf on either side of the body of the uterus; these are brought through the recti on each side and stitched together in the same manner as in the round ligament operation. The greatest difficulty in dealing with these cases is the fact that often there is an existing general visceroptosis. In anterior displacement, usually a complete dilatation of the cervix is all that is required with a pulling down and stretching of the ligaments, or a wedge-shaped portion of the cervix may be removed from the posterior portion, as has been suggested by Dudley.

DISCUSSION

DR. R. CALDWELL, Nashville: I have found as many retrodisplaced uteri in women who have not borne children as in child-bearing women, and yet so far as we could determine, in those women the perineum was normal. I am inclined to believe that if we can maintain the normal position of the uterus by means of the ligaments or guy-ropes, and maintain the proper angle, and bring the uterus forward, we will prevent retrodisplacements.

DR. C. N. COWDEN, Nashville: Not every woman with a backward displacement of the uterus, should be subjected to operation, because women are not all of the same nervous temperament, and while a backward displacement in one patient will create enough nervous disturbance to warrant an operation, in other instances such an operation would not be required. We must individualize in these cases before we can ever apply the rule in a sensible way.

Traumatic Perforation of Abdominal Viscera

DR. W. M. MCCABE, Nashville: Within the last eighteen months I have had the following cases of injury to the abdominal viscera: One gunshot perforating wound, the patient dying. Eight gunshot perforating wounds with bullets, four of which required resection; seven of the patients recovered. There were two gunshot-wounds of the liver, one operated on, and one not operated on; both patients recovered; one penetrating gunshot-wound; three stab wounds of the stomach through the left interspaces; four stab wounds of small intestines; one stab wound of ascending and transverse colon; one stab wound of the spleen; three penetrating stab wounds. All patients with stab wounds recovered. I believe that as a rule the median abdominal incision is preferable in gunshot wounds, but occasionally vary this procedure. I do not hesitate to make a subsequent incision if it will facilitate matters and allow of more thorough and satisfactory examination. If resection is decided on, I clamp the gut, take out a triangle of mesentery, and control the hemorrhage. A Connell suture of linen is then inserted at the mesenteric border, and this suture is run continuously around the gut, going through all coats. This part of the anastomosis is completed by suturing the rent in the mesentery with the same thread. This suture is covered with a Czerny-Lembert suture in the peritoneum, and reinforced with catgut, if necessary. I am careful to make the suture approximate, but do not allow it to constrict. I now examine the work, invaginate the bowel through the anastomotic ring, and if the thumb and forefinger meet I am satisfied. If only perforations are to be dealt with, I put in a purse-string suture of linen, if it does not constrict the lumen too much, or suture with a through-and-through linen suture and cover with a Czerny-Lembert of catgut or linen. The perforations having been closed, I wash the intestines with saline solution and drop them back into the abdominal cavity. The peritoneal cavity is then sponged out with gauze sponges; I never flush the cavity with any kind of solution. I have sponged away pumpkin seeds, tomato skins, feces, and other matter, and have yet to regret that I did not flush the cavity. If there has been much soiling of the peritoneum, I insert a drain. I should be delighted if the drain could be dispensed with, but as yet I have not been sufficiently convinced that it is a useless procedure. I have learned, however, that all drains produce necrosis of the abdominal wall, and for this reason they should always be brought through a separate stab, thus

allowing the abdominal incision to heal by first intention and preventing hernia and other complications. The patient is placed in bed in the Fowler position, the Murphy drip enema is given constantly, and all food and water is withheld for twenty-four hours. Purgatives are not given for at least five days. This treatment is not carried out unless I suspect that peritonitis is liable to occur. While I have done the end-to-end anastomosis with success, I believe the lateral method is safer and may use it hereafter.

DISCUSSION

DR. W. D. HAGGARD, Nashville: The meeting of the Southern Surgical and Gynecological Association in this city in 1896 marked the first crystallization of the expression of immediate abdominal section for every penetrating abdominal wound. It was the sense of that body that immediate exploration should be the rule in all cases of gunshot and stab wounds of the abdominal viscera, and since then I think this has been the opinion of most surgeons, and also that if we should fail to do this and peritonitis should occur, and we are powerless to control it after eight hours has been permitted to elapse, we have been guilty of a grave error. I think, sometimes, that in the future this may assume a medicolegal aspect. I do not feel that we should shirk moral responsibility in these cases, to say nothing of surgical responsibility. As a matter of fact, we have two lives in our hands—the life of the victim, and the life of the assailant. Dr. McCabe has reported an unusual group of cases, with a satisfactory rate of mortality, and the lesson we ought to learn is to suspect every penetrating wound of the abdomen to be a perforating one, and never rest contented until we see inside the abdomen and repair thoroughly every wound after having gone over every inch of the viscera.

DR. J. L. CROOK, Jackson: One remarkable thing in cases of this character is the improved mortality within the last five years. The point made of using a stab wound for a drain is a good one, whether operating for perforation of the intestine or for other purposes. If we can make drainage through a separate incision, we can get a better result than by draining in some cases through the original wound.

DR. J. A. GAINES, Nashville: One of our greatest authorities on duodenal ulcer, Moynihan, suggested that when there is perforation, especially when there are beans, lettuce, cabbage and things of that character in the abdominal cavity, another opening should be made and the abdomen flushed. I do not believe that we should make such an opening for the purpose of flushing out things of that character. Flushing should not be done; we should pick out these things, and clear out the foreign material as well as we can by mechanical applications, without flushing the abdomen, and using drainage in all cases of this character.

DR. L. L. SHEDDAN, Knoxville: I have observed that stab wounds are simpler than gunshot-wounds. I have seen two patients die because in closing the perforation the peritoneum was not closed a sufficient distance around the margin of the wound. Again, paralysis is more likely to follow an injury from a gunshot-wound than from a knife of a stab wound. The author of the paper said that in injuries of the liver, the liver does not bleed very much. It has been my observation that it bleeds very profusely when injured.

Cancer of the Breast

DR. H. M. TIGERT, Nashville, advocated surgical treatment for the relief of this condition.

DISCUSSION

DR. L. E. BURCH, Nashville: According to the statistics of the United Kingdom, one woman out of every twelve in the year 1908 died of cancer, and in the State of New Jersey last year more people died from cancer than from tuberculosis. The only way to effect a radical cure of this condition is to make an early diagnosis and operate promptly. Every tumor of the breast in a woman above the age of 35 should be removed and examined.

DR. B. MALONE, Memphis: There is great diversity of opinion as to the etiology of cancer. In Rome practitioners have reverted to the Cohnheim embryonic theory of cancer. They are using an emulsion of embryos in the treatment of cancer in the experimental laboratories there, and while they are not making many claims, the results have been encouraging. Dr. W. J. Mayo, who saw some of this work while he was abroad, says that in his opinion it promises more than anything else in the way of a specific cure for this disease.

DR. J. M. KING, Nashville: Every tumor of the breast should be removed before *x*-ray treatment is resorted to. I do not think any one should apply the *x*-ray treatment to a tumor of the breast unless it has recurred.

DR. E. T. NEWELL, Chattanooga: I have had two cases which showed that tumors of the breast occurring in women over 35 are not always malignant. One patient has gone five years since the removal of the tumor without recurrence, and the other three years without recurrence.

DR. MCPHEETERS GLASGOW, Nashville: In tumors of the breast occurring in young people it is advisable to remove the breast at once, but in a woman over 50 it might be well to watch the case carefully before advising operation. Certainly, operation should not be advised on seeing the patient once or twice.

DR. W. T. BLACK, Memphis: Early extirpation is the only remedy, and all tumors of the breast should be treated as malignant unless they are proved to be benign.

DR. J. OVERTON, Nashville: I think that we should use Coley's fluid in cases of inoperable cancer, unless some serum of more pronounced value is brought to the attention of the profession in the meantime.

DR. W. LITTERER, Nashville: It is important to examine the axillary glands in cases of cancer from a prognostic standpoint.

DR. C. A. ROBERTSON, Nashville, spoke of metastases in cancer of the breast, and detailed a very interesting case which came under his observation within the past eighteen months.

DR. W. H. WITT, Nashville: In two cases in my practice, the disease recurred after ten years in one, and in the other after seven years. These recurrences were metastatic in nature. One patient died two or three months following the recurrence.

Spina Bifida

DR. B. B. CATES, Knoxville: I previously reported three cases of spina bifida operated on, with one death. Since publishing this report, I have operated on four other patients with one death, making a total of seven operations with two deaths. There were five males and two females. The ages varied at the time of operation from 28 days in the youngest to 26 years in the oldest. The situation of the tumors was in the cervical region once in a female, twice in males; once in the lumbar region in a male, once in the lumbosacral region in a male, once in the upper sacral region in a male, and once in the mid-sacral region in a male. One step in the technic of the operation concerns the closure of the spinal defect with osteoplastic grafts. In not one of my cases was there enough bone at hand to cover the opening, so I used the deep fascia, by dissecting enough from without inward to cover over the defect when turned over the middle line. This fascia is strong and dense enough to form a strong bridge. It is not necessary to overlap the flaps, simply stitching the edges together with fine catgut being all that is necessary. I think that I caused necrosis in one case by imbricating the flaps, thus cutting off the blood-supply.

DISCUSSION

DR. J. L. CROOK, Jackson: I have had two cases of spina bifida under observation. In one of these the child was so weak that I did not think it would survive an operation, hence I did not operate. The other child was 8 months old and had a meningocele in the lumbosacral region, on which I operated successfully.

DR. B. MALONE, Memphis: My experience also is limited to two cases. In one, there was a meningomyelocele, and the other was a pure meningocele. In meningomyelocele, in which the sac is composed of cord elements, the prognosis is unfavorable.

DR. R. CALDWELL, Nashville: Attention should be given to the association of spina bifida with hydrocephalus. When this is the case, very little can be expected from operation, as these patients become hydrocephalic and die from exhaustion and imbecility after a few years of life.

(To be continued)

Book Notices

DIFFERENTIAL DIAGNOSIS. Presented Through an Analysis of 383 Cases. By Richard C. Cabot, M.D., Assistant Professor of Clinical Medicine, Harvard University Medical School, Boston. Cloth. Price, $5.50 net. Pp. 753, with 195 illustrations. Philadelphia: W. B. Saunders Co., 1911.

Cabot proposes to study medicine from the point of view of the presenting symptom, by the case-history method. Cases are grouped according to the chief symptom, such as headache, lumbar, abdominal or epigastric pain, fevers, chills, coma, convulsions, cough, hematuria, jaundice, etc. Each section is prefaced by a statement of the possible causes of the symptom under discussion. Illustrative cases follow, in which the salient points in the history, examination and laboratory findings are given, the differential diagnosis discussed, and diagnosis made. Numerous plates showing the distribution of pain, physical findings, etc., accompany the case histories. Diagrams are given, showing graphically the relative frequency of the several diseases in which any one symptom may be the principal complaint. These are based on hospital records and at times may be misleading to the general practitioner who sees a less selected series of cases.

Cabot is no respecter of traditions and, as occasion presents, criticizes those which he believes are not founded on facts—e. g., the relation of backache and pelvic disease, tapeworm and abdominal pain, poor teeth and digestive disturbances. It is perhaps superfluous to conduct obsequies over "rheumatism" and "gastralgia," as they have been buried already by most of the profession. The importance of lead intoxication as a cause of many obscure symptom-complexes is rightly emphasized. The cases cited in illustration of abdominal and epigastric pain are particularly instructive.

In many instances the diagnosis is arrived at through an admirable course of reasoning. We may, however, question the advisability, even for teaching purposes, of arbitrarily placing difficulties in the way of diagnosis by the suppression of facts which are obvious on careful examination. A diagnosis made in spite of omissions deserves no special credit. We may also question certain diagnoses in that they are made on insufficient evidence, or the resources of diagnosis are not all utilized. Abdominal pain is frequently caused by constipation, but to dismiss a case with this unreserved diagnosis after a short period of observation may be dangerous, in view of the frequency with which carcinoma presents the same symptoms. It is, however, easier to criticize a diagnosis than to make one, and the general impression made by a case often has a weight which cannot be conveyed by verbal expression.

Typographic errors are few. Kernig's sign is repeatedly referred to as "Koenig's" sign.

The chief value of "Differential Diagnosis" lies not in the introduction of new facts, but rather in the demonstration to the student of the manner by which he may arrive at a reasonable diagnosis by careful observation and proper correlation of the facts obtained from the history, physical examination and laboratory findings. To the practitioner also, who would go beyond the mere treatment of symptoms, or learn of the difficulties surmounted by another, this book will prove of great interest and value.

VAGINAL CELIOTOMY. By S. Wyllis Bandler, M.D., Fellow of the American Association of Obstetricians and Gynecologists. Cloth. Price, $5 net. Pp. 443, with 148 illustrations. Philadelphia: W. B. Saunders Co., 1911.

In this valuable work the author has very clearly stated the technic of vaginal operations and amplified them with comprehensive illustrations, so that the various surgical procedures are made perfectly clear. Even though the reader has had no personal experience with the vaginal route, he can hardly fail to see its advantages and the great field it offers in certain stated gynecologic operations. The history of anterior vaginal celiotomy is clearly outlined and beautifully illustrated and the possibilities and the indications are so accurately described that one is fully impressed with its value, while the comparative advantages of the vaginal over the abdominal route are succinctly expressed. The technic in anterior vaginal celiotomy is clearly outlined, and, although the author has fully impressed the reader with its difficulties, he encourages those who are not familiar with the route to become acquainted with it. The positive indications for conservative operations on the ovaries and tubes, retrodeviations of the uterus, and cystocele, are tersely given. Added to the subject of total uterine prolapse is the technic of the amputation of the cervix, which is an important evolution in the operative procedure for permanent correction of procidentia. The description of vaginal hysterectomy, myomectomy, vaginal Cesarean section, metreurynter incision, and minor vaginal Cesarean section, makes this volume a complete summary and the most comprehensive work in vaginal operations that has been published. It is invaluable to the gynecologist, the surgeon, and the obstetrician, as well as to every physician who desires to be intelligently informed on the late and advanced methods of gynecologic surgery.

PHOTOGRAPHIC ATLAS OF RADIOGRAPHY OF THE MASTOID REGION AND OF THE NASAL ACCESSORY SINUSES. By Joseph C. Beck, M.D., Clinical Professor of Oto-Laryngology, College of Physicians and Surgeons, University of Illinois. Half Morocco. Price, $8. St. Louis: The Laryngoscope Co., 1911.

This loose-leaved atlas, so constructed as to permit changes to be made in the radiographs it contains, has been compiled by Dr. Beck with the cooperation of a radiologist and a photographer. To avoid marking the photographs which have been used, half-tones being unsatisfactory, the author follows the scheme of using an outline drawing to explain the radiograph after the manner of Killian's "Atlas on Face Reproduction." The importance of following the technic, which is fully outlined, is emphasized. Three positions are suggested: The postero-anterior position shows the frontal sinuses, ethmoids, orbits, and the antra and nasal cavities; the lateral position, the sphenoidal sinuses, the sella turcica and the depth of the frontal; the mastoid position is limited to use in studying the mastoid, the middle ear and the lateral sinus. These positions permit of the study of fractures and diseases of the bones and of foreign bodies, as well as the condition of the sinuses. The photographic methods that have given best results are explained. Eight stereogram illustrations are presented; four showing the positions described, three radiographs of a skull taken in the different positions, and one the difference between a stereoscopic and pseudoscopic image as shown in Dr. Kelly's atlas. Then follow twenty-five photographs, 19 cm. by 24 cm., from radiographs of the skull and of the head, showing the normal and certain abnormal conditions of the sinuses and some results of faulty technic.

The purpose of the atlas is to aid in the interpretation of radiographs of the head. To the degree that it is accepted as establishing a standard of technic, it will attain its object.

SERUM AND VACCINE THERAPY. Bacterial Therapeutics and Prophylaxis Bacterial Diagnostic Agents. By R. Tanner Hewlett, M.D., F.R.C.P., D.P.H., Professor of General Pathology and Bacteriology, King's College, London. Second Edition. Cloth. Price, 7 shillings 6 pence net. Pp. 406. London: J. & A. Churchill, 7 Great Marlborough Street, 1910.

The first chapter of this book is taken up by an introductory consideration of the principles underlying immunity processes in general. The preparation and practical application of the various antitoxic and antimicrobic serums are then concisely described. The section of the book dealing with the principles of vaccine therapy, and giving practical directions for preparation and use, is especially valuable. Hewlett's views concerning direct transfusion are somewhat at variance with the prevailing American ideas and the subject is therefore dismissed with but slight consideration. The references to important literature on the different subjects constitute a valuable portion of the book.

TUBERCULOSIS OF FARM ANIMALS. Bulletin 149, University of Illinois Agricultural Experiment Station. By Charles F. Briscoe and W. J. MacNeal. Urbana, Ill., February, 1911. Paper. Pp. 431.

This bulletin contains a splendid summary of the findings of experimenters and investigators in this and foreign countries concerning tuberculosis in farm animals, especially with reference to its transmission by means of the bovine form of the bacillus to human beings through the various channels. It also contains the results of the study and experiments at the University of Illinois Agricultural Experiment Station, together with an extensive bibliography relating to this line of work.

Medicolegal

Evidence Which Dead Body Cannot Be Made to Furnish

The Supreme Court of New York, Special Term, Erie County, holds, in the case of Danahy vs. Kellogg (126 N. Y. S. 444), that no right of exhumation, inspection, dissection, microscopic examination, and taking of culture is furnished in a civil action by the code provision in that state that a court of record has power to compel a party to make discovery of any article or property in his possession or under his control relating to the merits of the action or of the defense therein.

In this case was the first application of the kind ever made, so far as the court is aware. The action was brought by the administratrix of the estate of Matthew Danahy, deceased, to recover damages for his death, alleged to have been caused by injuries received in a collision with an automobile claimed to have been owned by the defendant. The accident occurred July 10, 1909, and the death of Danahy on November 20, 1910. The certificate of death signed and filed by the attending physician stated the cause to have been malignant endocarditis. The discovery and inspection of the body, with permission to take cultures and to have microscopic examinations made, it was alleged, would furnish the means of determining the exact cause of said disease.

The denial of the application was based squarely on the absence of any right or authority in the court to grant the inspection, etc., asked, notwithstanding the provision in the code above mentioned. In considering the latter, the court is sure that the legislature could not have had any intention to include the body of a dead person within the description of an "article" or "property," or have had in mind an application to exhume the remains of a deceased person for the purposes of the section. But, even though it authorizes an order for the production and inspection of a buried human body, the court finds nothing in the section which could possibly authorize its dissection, etc. If the article to be inspected were a piece of machinery, instead of a human body, the court, under the section relied on, would not be warranted, it thinks, in making an order permitting the machinery to be taken apart, and a part of it carried away for the purposes of further examination. Much less would the court be justified in permitting an autopsy on a human body.

There is, strictly speaking, no right of "property" in a dead body. A long line of judicial decisions appear to have established the general doctrine to that effect, although the law has been relaxed to the extent of giving the husband, widow, or next of kin the right of protecting the remains of the dead and saving them from desecration, which can be enforced by appropriate legal remedies.

Validity of City Ordinance Requiring Tuberculin Test

The Supreme Court of Wisconsin, in Adams vs. City of Milwaukee and others (129 N. W. R. 518), holds valid a city ordinance requiring the tuberculin test, and that there was no error in a judgment against enjoining the enforcement of the ordinance. It says that it is not necessary to support the ordinance to show that human pulmonary tuberculosis is caused by drinking the milk of cows afflicted with bovine tuberculosis. If the milk of such cows produces disease of any kind, or is harmful to health, this is a sufficient basis for police regulation of its sale and distribution in the city.

Attention was called to chapter 542, Laws of Wisconsin for 1909, and to the following statutes of other states, recognizing the efficiency of the tuberculin test: Indiana, chapter 181, Laws 1909; Delaware, chapter 122, Laws 1909; Maine, chapter 133, Laws 1909; Maryland, chapter 466, Laws 1910; Michigan, chapter 172, Laws 1909; Minnesota, chapter 392, Laws 1909; New York, pages 28, 29, vol. 1, Consol. Laws 1909; North Dakota, chapter 160, Laws 1909; Oregon, chapter 213, Laws 1909; South Carolina, chapter 131, Laws 1909; South Dakota, chapter 291, Laws 1909; Tennessee, chapter 475, Laws 1909; Vermont, No. 1, chapter 163, Laws 1908; Virginia, chapter 335, Laws 1910. The court was also referred to the cases of State vs. Nelson, 66 Minn. 166; Nelson vs. Minneapolis (Minn.), 127 N. W. R. 445, and New Orleans vs. Charouleau, 121 La. 890.

The evidence and findings in the present case, this legislation, and these decisions, go to show a widespread recognition of the danger of infection from bovine tuberculosis and of the efficacy of the tuberculin test. When there are conflicting scientific beliefs or theories in such matters it is for the city council to determine on what theory it will base its police regulations, and unless it is clearly and manifestly wrong it is not for the courts to interfere on the ground that the scientific theory on which the ordinance is based is incorrect or unsound.

Nor does the court consider that the ordinance is rendered void because it applies only to dealers in milk drawn from cows outside of the city, when there are other regulations covering the sale of milk drawn from cows kept within the city. There is a sufficient basis for such classification in the difference of facility for inspection and regulation.

Furthermore, the court thinks that a situation was disclosed in which it might be said that the common council had the right to decide that destruction of the milk was the only available or efficient penalty for the enforcement of the ordinance, and that such destruction was necessary, and the ordinance cannot be declared unreasonable in this particular. Then the plaintiff himself must by his own act expose his property to confiscation before this portion of the ordinance will affect him injuriously, and there is a distinction recognized in some cases between preexisting nuisances and those created by wilfully placing property in the forbidden place or condition after the enactment of an ordinance, and in defiance of it. Self-inflicted damage is not recoverable.

Who Accounted "Physicians Now Registered" Under Medical Practice Act

The Supreme Court of Missouri, Division No. 2, holds, in State vs. Carson (132 S. W. R. 587), that, as the defendant was concededly registered and licensed under the Missouri act of 1877, he came squarely within the exception to the act of 1901, as "a physician now registered," and that no subsequent act of the Missouri legislature has revoked the license given him under the act of 1877, so that it was error to require him to have been also licensed by the board of health.

The court says that, after the defendant was duly registered under the act of 1877, namely, in 1880, by filing a copy of a diploma, the legislature passed the act of 1883, which provided that it should not apply to those who had been practicing medicine five years in that state prior to the enactment of that law, but contained no provision as to prior registration. Then came the act of 1901, making it a misdemeanor for any person, "except physicians now registered," to practice medicine or surgery without a license from the State Board of Health. The trial court held that a physician registered under the act of 1874 was a registered physician within the meaning of the law of 1901, and a physician registered under the act of 1877, five years before the act of 1883 went into effect, would be registered within the purview of the law of 1901, but, inasmuch as the defendant was not registered until 1880, less than five years before 1883, he was not a registered physician within the meaning of the law of 1901, which last conclusion was erroneous.

The construction which the state sought to have given the act of 1901 would necessitate the court amending the statute so that it would read: "Any person, except physicians now registered and qualified to practice under the laws of 1883." The defendant was not prosecuted for a violation of the act of 1883 while it was in force. That act was, in turn, repealed by the act of 1901, and five years' practice no longer afforded protection. Thus if a physician had practiced five years before 1883, but was not registered, he would clearly fall under the condemnation of the act of 1901 because he was not registered. What effect then had the act of 1901 on the registration of the defendant's diploma and certificate in 1880? The diploma was registered under the law of 1877, and no subsequent act required or permitted it to be registered again. While it might or might not have protected him from prosecution during the life of the act of 1883, what was there to prevent the legislature repealing the act of 1883 as it did, and providing

that his registration under the act of 1877 should protect him from prosecution and permit him to continue his practice? No act of the legislature had revoked the license the state had granted him in 1880, and no tribunal authorized to do it had done so. Even if it should be said that the act of 1883 impliedly rendered his registration ineffective, it cannot be doubted that the legislature could restore its efficacy by express provision as it did in 1901. This court is unable to see any substantial reason why a physician registered under the act of 1874 should be within the exception to the act of 1901, and one registered under the act of 1877 under the broad language of the exception of the act of 1901 does not also fall within the act of 1901.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Boston Medical and Surgical Journal

April 13

1 *An Analysis of Forty-Six Cases of Prostatectomy. L. Davis, Boston.
2 *Vaccines in Puerperal Sepsis: W. H. Watters and C. A. Eaton, Boston.
3 *Intrathoracic Insufflation Anesthesia: Apparatus and Cases. A. Ehrenfried, Boston.
4 Extirpation of the Tonsil by Enucleation: Partly Instrumental, Partly by the Use of the Finger. L. M. Freedman, Boston.

1. **Prostatectomy.**—A summary of the results obtained in the twenty-four cases of perineal prostatectomy reported by Davis, shows that two patients died; in neither case was death directly due to the operation. All the others left the hospital in good condition with obstruction relieved. In fifteen cases, the end-results have been excellent in every respect—all that could be expected or desired. In two other cases the result is marred only by the loss of sexual power. One patient has a persistent cystitis which is symptomatically controlled by regular treatment; otherwise he is well. In four cases the results are not so satisfactory. In one there is poor control of the bladder, so that the patient prefers to wear a urinal. In another there is, at times, under stress, lapse of control. Two patients have persistent perineal fistulæ; in one of these there is also some cystitis.

Of the twelve patients operated on by the upper route, two died. One patient, in whom the complication of closure of the bladder outlet during convalescence occurred, requiring a secondary operation, has not been traced since discharge. There is no reason why the final result should not have been satisfactory, however. In one case in which the suprapubic operation followed an unsuccessful partial perineal prostatectomy, by another surgeon, Davis says that the incontinence which followed unquestionably would not have occurred if the external sphincter had not been injured in the first operation. In the eight remaining cases the functional results were excellent. Two patients have died since leaving the hospital, one three months afterward of pneumonia, one four years later of new growth of bladder; in neither were there any symptoms on the part of the prostate. Six patients have recently reported themselves alive and well without urinary symptoms. Data as to amount of residual urine are unfortunately meager; several of the patients lived at considerable distances and were able to report only by letter. In six cases in which it was recorded, the highest amount was 1½ ounces in a man who previous to operation had lived a catheter life for fifteen years; in the other five cases it was less than 1 ounce. As to sexual power, data are still scantier. Two patients are known to have retained it; in one patient who underwent both operations it was lost.

2. **Vaccines in Puerperal Sepsis.**—Fifty cases are reported by Watters and Eaton. This includes all patients who have been treated, the good and the bad, the early and the late. Among this series are a few who received ante partum prophylactic injection on account of bacteriologic findings or unusual opportunities for possible puerperal infection. These all recovered. It is of further interest that certain others who likewise received prophylactic treatment showed pure cultures of streptococcus in the uterus post partum, but without any clinical symptoms of sepsis or other complication. This was never noted in other normal patients not so treated. Among the fifty cases reported, four patients died within twenty-four hours of the first treatment, being practically beyond any hope of recovery when vaccines were first requested. Three others were moribund when inoculations were begun. Here life was possibly prolonged two or three days. Apart from these, there are forty-three patients, two of whom died and forty-one recovered. Of the two who died, one was operated on for suspected pus tube, which was not found, the patient dying six days after; the other was subjected to blood transfusion, dying within a few hours.

The method of using the vaccine was to administer a polyvalent preparation immediately after the diagnosis seemed definite, as determined by bacteriologic tests and to repeat as necessary until the autogenous preparation was ready, about twenty-four hours later. The vaccines were prepared by the use of the minimum degree of moist heat, a method apparently followed by better results than when the earlier method was employed. Careful watch was made to ascertain any possible injurious effects or aggravation, but even in the worst cases none could be demonstrated. On the contrary, a number of patients who seemed to be almost without hope of recovery made very happy convalescences. No claim is made by the authors that the vaccines should replace other generally recognized methods. On the contrary, they insist that the vaccines should be used to assist all other methods that have proved to be of value. In the series reported a hot vaginal douche has usually been employed; very rarely, in only one or two cases, an intra-uterine douche. Curettage was not performed in any instance. The bowels have been maintained in an active condition and remedies have been used when indicated. The authors have strongly advised leaving the patient as free from manipulation or local treatment as possible, and believe that the results well bear out these instructions. Two facts are given in conclusion: One that no demonstrable harm has been often done to any person; the other, that patients have shown much improvement after the inoculations and have recovered when even the best clinicians have foretold a fatal termination.

3. **Intrathoracic Insufflation Anesthesia.**—The apparatus Ehrenfried uses consists of a Wolff bottle with three necks sitting within a copper water jacket, and a foot bellows. By means of cocks on the outside of a jacket, the stream of air from the bellows can be carried through the hot water, over the top of the ether (contained in the Wolff bottle), or through the ether when a particularly strong vapor is desired. Air and ether vapor may be mixed in any proportion. Connected with the delivery end of the apparatus is a safety valve and pressure regulator consisting of a bottle of mercury into which a tube is plunged. The depth of the tube in the mercury, which is adjustable, represents the maximum of pressure which is allowed within the apparatus; if for any reason, such as a spasm of the glottis, the pressure should rise, the valve "blows off" automatically and danger from interstitial emphysema is avoided. In his early experiences, Ehrenfried employed a dial manometer registering in millimeters of mercury, to record the pressure, but he has found that the pressure bottle answers as well for all practical purposes. The apparatus is provided with a device to prevent droplets of condensed ether being carried over into the larynx.

The air or mixture is supplied at a practically constant temperature of about 10 degrees above room temperature; if the operation is to last over half or three-quarters of an hour the contents of the water-jacket should be replaced. The air supplied may be filtered and moistened. For an intratracheal tube he uses a French lisle catheter, 22 to 24 F., moistened in hot water to render it pliable, a new and sterile one being used for each case. Soft rubber tubes have the advantage of standing sterilization by boiling better, but they are less easy to introduce. The chief difficulty with this method of anesthesia so far has been the introduction of the tube. He now uses a simple introducer, a laryngeal forceps with sleeves attached for grasping the tube near its extremity, similar in principle to the introducer of Doyen. After considerable pains to produce the proper curve—working on frozen sections and cadavers—Ehrenfried has devised an instrument which can

be guided into the larynx in a few seconds, with the mouth gag in place and the left forefinger on the epiglottis, without the necessity of using a head mirror or electric illumination, or changing the patient on the table to and from the Rose position, as is necessary with the direct laryngoscope. Ehrenfried has tried this apparatus successfully four times on human beings.

Medical Record, New York

April 8

5 *Posture as an Aid in Diagnosis and Treatment of Cardiac Affections and Dropsical Conditions of Various Origin. H. W. Berg, New York.
6 The Chemotherapy of Ehrlich, with Special Reference to the Trypanosome Infections. B. T. Terry, New York.
7 Death-Rates in the Japanese War. C. E. Woodruff, U. S. Army.
8 *A Case of Erythremia with Unusual Features. N. E. Brill, New York.
9 Psychoses of Child-Bearing. J. D. Morgan, Washington, D. C.
10 Acute Urethritis of Chemical Origin. W. J. Robinson, New York.
11 Removal of the Septal Floor in Submucous Operations. A. Kahn, New York.

April 15

12 Purpura. J. S. Thacher, New York.
13 *An Unusual Fracture of the Bodies of the Fourth, Fifth and Sixth Cervical Vertebræ, with Injury of the Spinal Cord. W. H. Swan, Colorado Springs, Colo., and C. A. Powers and H. T. Pershing, Denver.
14 Four Cases of Ureteral Calculus. H. D. Furniss, New York.
15 Metallic Foreign Bodies in the Tissues; a New Telephonic Searcher. W. S. Thomas, New York.
16 Embolism and Thrombosis of the Pulmonary Artery; Report of Three Cases. J. Funke, Atlanta, Ga.
17 *Sterilization of the Skin by a New Iodin Solution. E. McDonald, New York.
18 Case of Congenital Cystic Degeneration of the Kidney. H. B. Mills, Philadelphia.
19 Short Talks with My Students and Others, Being Random Suggestions for the Younger Practitioners. R. H. M. Dawbarn, New York.

5. **Posture as an Aid in Diagnosis of Cardiac Affections.**—It is for cases of extreme cardiac failure due to dilatation secondary to severe valvular disease or myocardial disease that Berg has found that a posture which is a combination of recumbency with vertical or semivertical position, forms a powerful adjuvant in the treatment. He has placed such patients in bed with the head of the bed raised, as in the Fowler position, but with the patient in what he calls the reversed Trendelenburg position. The patients lie on an inclined plane, body and legs extended, with the head and shoulders at the top and the feet at the bottom of the inclined plane. The posterior legs of the bed on which the patient lies are raised 4 to 24 inches from the floor, resting on chairs or wooden supports with a broad base and narrower top, shaped like truncated cones or pyramids, or by any other means that may occur to the physician or some ingenious relative. The full heignt of 24 inches should not be attained, however, at one stroke, but gradually, so that the patient may not get an annoying sense of insecurity from the unaccustomed attitude of lying on an inclined plane, down hill, as it were. At the foot of the bed the patient's feet should rest against a well-bolstered or padded wooden rest, which extends across the width of the bed. Well-padded boards, 15 to 18 inches wide, should bound the sides of the bed to prevent the patient slipping out during sleep.

The whole structure should be as firm as though the patient's bed were resting in the usual horizontal manner on the floor, in order to give the sense of security. The patient's head and shoulders should be supported by pillows and sometimes by a head rest. The body should lie recumbent on the bed in this inclined plane without any bend at the hips, so that the maximum downward effect of gravity on the liver and abdominal organs may be obtained. The upward pressure on the diaphragm is thus removed, the heart relieved by the increased space thus obtained, and the venous return in the portal veins, vena cava and pulmonary veins encouraged. Berg has seen patients suffering from cardiac failure as a result of dilatation complicating valvular disease and myocarditis, more especially when mitral regurgitation is an element of the valvular disease, immensely relieved of their dyspnea by this posture alone, even before other more direct therapeutic measures were applied.

8. **Erythremia.**—Brill's patient, in addition to an erythrocytosis of between 8,000,000 and 10,000,000 cells, a leukocytosis varying between 20,000 and 45,000 leukocytes, presented few features of a cyanosis, a much relatively diminished hemoglobin content, the color index being far below 1, showed marked signs of bone marrow involvement with a colossal spleen and a very large liver. The spleen was much larger than in other affections, excepting those found rarely in leukemia and more commonly in the Gaucher type of primary splenomegaly. But even in these affections Berg has never seen a larger spleen than this patient presented. From the clinical evidence, he says, one must conclude that this patient was suffering with the disease which has been variously called polycythemia with chronic cyanosis, splenomegaly, erythrocytosis, splenomegalic polycythemia, myelopathic polycythemia, erythremia, erythremia megalosplenica, Vequez's disease, Osler's disease.

13. **An Unusual Case of Fracture.**—The subject of this report was a man, aged 70, who had always been remarkably active physically and mentally. He had been for years harrassed by a gouty eczema and had been treated for arteriosclerosis some years before. About seven months prior to the injury to be described, after a hard day's ride and tramp in the mountains, he had acute dilatation of the heart, from which he suffered up to the time of his accident, though he persisted in long rides and unwarranted exercise. About noon, Oct. 27, 1906, while riding, his horse stumbled. He was thrown, evidently striking on his forehead. There was immediate and complete motor and sensory paralysis below the neck without loss of consciousness. There was involuntary evacuation of the bladder and bowels at the time of the accident and again after being put to bed. By the use of moderate doses of morphin, the patient passed a fairly comfortable night, requiring catheterization; priapism was present. There was no difficulty in swallowing.

During four or five weeks following the injury he was catheterized three times daily and had no irritability of the bladder. From that time up to the time of his death he was catheterized from four to ten times in twenty-four hours, the frequency varying without apparent physical cause. He was given hexamethylenamin continuously during the twenty-eight months of his illness, in daily doses of from 10 to 30 grains. There were apparently no harmful effects from it unless it had to do with the constantly low solids in his urine during the last twenty-four months of his life. He never regained control of his bladder, though after three months he could reinforce the flow and a few times voluntarily passed 1 or 2 ounces. There was often marked tympanites and digestive disturbance, but, for the most part, the bowels were easily moved daily by laxatives and enemata. Occasionally there were loose involuntary movements. There were a number of periods of great weakness and mental hebetude, which were relieved by free elimination by the bowels. There seemed, at times to be an element of mental fatigue in this depression. Sleep was always difficult, requiring constant use of hypnotics. At the end of nine weeks the patient was up daily, taken out in a wheel-chair, and very soon was lifted into his automobile and was taking long rides. During the following year he often drove for five or six hours a day, with no apparent fatigue, was taken to a number of social functions in his own and adjoining towns, and took keen, active interest in all affairs of life. Mentally he was extremely active, at times giving close application to business affairs for six or seven hours a day. He became able to write short notes (writing by whole arm movement); could, without effort, feed himself by means of a spoon or by taking food in his right hand, and was often taken to the dining table, and about his house and grounds in his wheel-chair. He could move his legs to a considerable degree (the right leg and arm much more than the left) but could never stand or sit alone, nor was he ever able materially to change his position in bed without help. The heart at times showed a systolic murmur of the apex, but from the time of his injury was entirely competent.

At the end of eighteen months he had become more sleepless and depressed. He then went to England, making the trip very comfortably. During his six months' stay there he had an attack of bronchitis and lost ground in all ways, coming home in November, 1908, considerably weaker physically and

less active mentally than when he left. During the winter he drove in his automobile almost daily, up to two days before his death, when he became uremic, and died March 13, 1909, twenty-eight and one-half months after his injury. The points of general interest in this case seem to be: (1) The marked mental activity and endurance of the patient; (2) prolonged excessively low solid content in the urine; (3) prolonged use of hexamethylenamin without apparent harm; (4) relief from long standing eczema; (5) the acquiring of compensation in a weak heart by enforced rest; (6) avoidance of bedsores and cystitis. The bodies of the fourth, fifth and sixth vertebræ were moderately crushed together without buckling of the spine or encroachment of its canal.

17. **Skin Sterilization by Iodin.**—The mixture used by McDonald consists of iodin, 2 parts; carbon tetrachlorid, 98 parts.

New York Medical Journal

April 15

20 Causes and Treatment of Rectal Constipation and Obstipation. S. G. Gant, New York.
21 Symptomatology of Leprosy. H. Fox, New York.
22 Evidences that the School Nurse Pays. S. W. Newmayer, Philadelphia.
23 Anterior Polioencephalitis. I. D. Steinhardt, New York.
24 A Case of Syphilis Followed by Paresis. C. Pope, Louisville.
25 Etiology of the Functional Nervous Diseases. G. E. Price, Philadelphia.
26 *Duodenal Ulcer. J. M. Lynch, New York.
27 Importance of Nasal Breathing. A. E. Schmitt, New York.
28 Rôle of Acute Bronchitis, Exacerbations and Remissions in Pulmonary Tuberculosis. H. J. Hartz, Philadelphia.

26. **Duodenal Ulcer.**—In the case reported by Lynch the patient gave no history of any disturbance of digestion. Her pain was all referred to the region of the appendix, and the tenderness was confined to the same region. Later, Lynch elicited the fact that she suffered off and on from what she called indigestion; that she occasionally had pains coming on some four or five hours after eating; took something for relief, vomited and felt better after it.

Lancet-Clinic, Cincinnati

April 8

29 Research Work in Mechanical Therapeutics. R. K. Smith, Boston.
30 A Case of Vagus Heart-Block, and Its Relation to Vagotonie. L. H. Newburgh, Cincinnati.
31 Tonsillotomy or Tonsillectomy? F. W. Davis, Cincinnati.

April 15

32 *Pulmonary Tuberculosis and Syphilis. R. H. Babcock, Chicago.
33 Convergent Squint; Its Etiology and Necessity for Its Early Treatment. H. C. Parker, Indianapolis.
34 Pleural Effusions, Their Diagnosis and Treatment. E. B. Montgomery, Quincy, Ill.
35 Surgical Aspect of Salvarsan. D. C. Handley and C. T. Souther, Cincinnati.
36 The Doctor in the Millcreek Valley Forty Years Ago. F. H. Rowe, Cincinnati.

32. Abstracted in THE JOURNAL, Oct. 1, 1910, p. 1220.

American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

March

37 Multiple Cesarean Section with Results in Thirty-Nine Cases, Done at the New York Lying-In Hospital. R. McPherson, New York.
38 Cesarean Section; Twenty-Seven Cases Without Maternal Mortality. G. M. Boyd, Philadelphia.
39 Contusions of the Abdomen, Resulting in Injury to the Contained Viscera. F. H. Jackson, Houlton, Maine.
40 Uterine Perforation, Laceration of the Small Intestine, Resection, Hysterorrhaphy. S. Wiener, New York.
41 Fibroid Tumors Complicating Pregnancy, Labor and the Puerperium. J. T. Johnson, Washington, D. C.
42 The Pathologic Versus the Physiologic Era in the Surgical Treatment of Intra-Abdominal Infections. J. W. Kennedy, Philadelphia.
43 Simultaneous Occurrence of Adenocarcinoma and Sarcoma in the Same Uterus. A. T. Jones, Providence, R. I.
44 Choice of Delivery in Moderately Contracted Pelves. W. G. Dice, Toledo, Ohio.
45 Conservative Surgery of the Ovaries and Fallopian Tubes. H. S. Lott, Winston, N. C.
46 Fatal Mercurial Poisoning Due to Vaginal Introduction of Bichlorid Tablets. C. B. Schildecker, Pittsburg, Pa.
47 Clinical Considerations of Pelvic and Peritoneal Tuberculosis. C. S. Foster, Pittsburg, Pa.
48 Split Protein Feeding. G. F. Little, Brooklyn, N. Y.
49 Hysteria in Children. R. H. Dennett, New York.
50 Chronic Intestinal Indigestion in Children. T. J. Elterich, Pittsburg, Pa.

April

51 Intramural Abscess of the Uterus. C. C. Barrows, New York.
52 Puerperal Infection, Clinical Varieties and Treatment. J. A. Harrar, New York.
53 Chorioepithelioma. M. Caturani, New York.
54 *Hysteropexies. G. K. Dickinson, Jersey City, N. J.
55 *Four Cases of Eclampsia; Their Treatment. G. W. Kosmak, New York.
56 Treatment of Puerperal Septic Infection and Report of a Case of Septic Thrombophlebitis of Long Duration. W. E. Parke, Philadelphia.
57 Treatment of Acute Puerperal Sepsis. E. J. Ill, Newark, N. J.
58 *Abstraction of Calcium Salts from the Mother's Blood by the Fetus the Cause of Puerperal Eclampsia. J. G. Drennan, Arrocnar, Staten Island, N. Y.
59 Epidemic Infantile Paralysis and Its Control by the State Authorities. B. Sachs, New York.
60 Contagiousness of Acute Poliomyelitis. I. Strauss, New York.
61 Infantile Paralysis—Epidemic and Pandemic. J. van V. Manning, Brooklyn, N. Y.
62 Treatment of Infantile Paralysis by Massage and Electricity. H. W. Frauenthal, New York.
63 Manifestations of the Acute Stage of Poliomyelitis in Children. L. G. Kerr, Brooklyn, N. Y.
64 Surgical Treatment of Anterior Poliomyelitis. D. D. Ashley, New York.

54. **Hysteropexies.**—The object of Dickinson's paper is to encourage a broader study of woman and her miseries, of the many conditions inducing and perpetuating the uterine syndrome, of the relation of uterine deviations to other lesions, and the necessity for selecting skilfully a proper operation, with other treatment added, which shall not only comfortably and permanently replace the organ, but relieve the woman of coexisting pathologic states.

55. **Eclampsia.**—The four cases presented by Kosmak are examples of the average run of eclamptic cases, except that two of them were especially severe. Notwithstanding this, the amount of albumin in the urine was not very great, although the quantity of the urine was restricted. It seems to Kosmak that the latter is a fairly safe guide in the prognosis. Emptying the uterus should, he says, constitute only one step of the treatment and should be carried out with the least possible danger to the mother. This means that the forcible methods of dilating the cervix which have been so largely employed in this class of cases should not be permitted, as we have other means to accomplish the same ends. Vaginal Cesarean section or that by the abdominal route, if no contra-indications are present, offers an excellent chance for rapidly relieving the uterus of its contents. There is no doubt whatever but that the former operation can be carried out rapidly and satisfactorily as regards the actual delivery of the child, but the suture of the wound in the cervix and also in the lower uterine segment is necessarily a difficult procedure as it is almost impossible in many cases to bring the upper portion of the wound down into the field of vision.

58. **Abstraction of Calcium Salts.**—Drennan is convinced that the abstraction of calcium salts from the mother by the fetus causes fatty infiltration of the liver cells of the former. This fatty infiltration causes disturbed liver function with the production of toxins from imperfect protein digestion. Circulation of toxins causes fatty degeneration of liver cells thereby increasing the inability of the liver to functionate, with resulting increased toxemia. She says that no chloroform should be administered as it produces fatty degeneration of liver cells. The prevention and treatment of this condition consists in a liberal calcium diet, lessened protein food and, if the patient is not seen until labor has commenced, rapid delivery to rid her of the fetus which is draining her of calcium salts. The hemorrhage attendant on delivery—and in these cases it is sometimes excessive, owing, no doubt, to lack of calcium salts in the blood—will rid the organism of much toxic substances and have a curative effect.

California State Journal of Medicine, San Francisco

April

65 *The Commitment of the Insane in the State of California. A. W. Hoisholt, Stockton.
66 The Municipal Refuse Disposal Problem, with Special Reference to Alameda County Conditions. C. G. Hyde, Berkeley.
67 Diseases of Domesticated Animals Affecting the Public Health in Alameda County. C. M. Haring, Berkeley.
68 Opportunities of the State Hygienic Laboratory. W. A. Sawyer, Berkeley.
69 *The Making of a Health Officer. W. C. Rucker, San Francisco.
70 The Obstetric Consultant. E. M. Wilder, Sacramento.
71 Treatment of Rodent Ulcer. D. Friedlander, San Francisco.
72 Osteoplastic Operations in Pathologic Bone Cavities. D. D. Crowley, Oakland.
73 A Case of Aneurysm of the Abdominal Aorta, with Operation and Introduction of Wire. J. H. O'Connor, San Francisco.

XUM

65. **Commitment of the Insane in California.**—The evils connected with the apprehension, detention and commitment of the alleged insane, and their transfer to state institutions are summed up by Hoisholt as follows: (1) They, as sick people, are not understandingly looked after by the police or constables at the time of their arrest. (2) They are still, in some quarters, kept in insanitary places of detention (jails), in which they are given little if any medical attention, and which places are now and then infested with vermin. They are not kept clean while there, nor as a rule furnished with clean clothes when they leave. (3) They are not given as thorough an examination prior to and at the time of their commitment in court as many of the cases require, the special qualifications of the examiners in lunacy being much below par, a matter, however, which time and proper teaching of psychiatry in the medical schools can rectify. (4) They are escorted by men who are accustomed to take care of criminals, but unqualified as nurses to look after this particular class of sick people, and who are doing this in a very uneconomical way.

69. **The Making of a Health Officer.**—Rucker suggests that if a state is blessed with an unusually efficient and progressive board of health, what would be more natural than for that board to offer instruction gratis to all health officers within the state? The cost would not be great and would include printing, postage and a few books of reference to be loaned to those taking the work. As an experiment, a course in public water-supplies might first be offered, and if this proved a success, the scope of the work might be extended. It is believed that such an opportunity would be welcomed, and in offering it no reflections would be cast on the ability of those who, against great odds and an insufficient remuneration, are fighting the public's sanitary battles. A few lectures on hygiene and the occasional opportunities for self improvement afforded by the meetings of the health officers' association and a few scattering articles in the medical journals, cannot be compared with a regular course of study mapped out by men of the experience and learning of an efficient state board. It is admitted that the correspondence method of instruction is not ideal, but it is believed that it would serve to close the present hiatus until better means can be afforded.

Journal of the Arkansas Medical Society, Little Rock

March

74 Surgical Tuberculosis. W. A. Snodgrass, Little Rock.
75 Treatment of Pelvic Cellulitis in the Female. R. C. Dorr, Batesville.
76 Treatment of Fractures of the Long Bones. H. H. Smiley, Texarkana.
77 A Limited Experience in Treatment of Uncinariasis. A. E. Cox, Helena.
78 The Country Physician's Alimentation. C. S. Allen, Harmony.

Texas State Journal of Medicine, Fort Worth

April

79 Uncommon Forms of Acid Intoxication. A. E. Austin, Galveston.
80 Chronic Pancreatitis, Its Diagnosis and Treatment. J. T. Moore, Houston.
81 Two Cases of Septic Emboli Following Acute Mastoiditis. W. D. Jones, Dallas.
82 Surgical Eye Cases. V. H. Hulen, Houston.
83 *The Open-Air Treatment of Postoperative Nausea and Vomiting from Chloroform and Ether. F. L. Barnes, Trinity.

83. **Open-Air Treatment of Nausea.**—Barnes believes that the very best treatment for chloroform and ether nausea and vomiting is plenty of fresh air; that it is not only essential that fresh air should be supplied in a large volume, but that it should be kept moving, in order that the nauseating odors of the exhalations may be removed rapidly. His observation has this history: A great many negroes for whom there are no hospital accommodations, come to his associate and himself for operations. Originally they had an operating room and beds in connection with their office, but it soon became such a nuisance to have this class of patients continually around the office that they hit on the expedient of having them carried immediately from the operating room to their boarding places. Out of a great many cases handled in this manner, they have never had a single mishap, or a single bad symptom follow the practice. They have never known one of these patients to vomit after being carried into the open air, and they are almost never nauseated. The distances from the operating room to the places to which these patients have been conveyed have varied from ¼ of a mile to 2½ miles.

Immediately on the completion of the operation, the patient is placed on a cot, wrapped in blankets, with the face always exposed to the open air, and external heat applied. The cot is then placed in a wagon or hack and driven slowly to the boarding place. If the patient is awake and nauseated when the hack arrives at its destination, they direct that the cot be not carried into the house until the nausea passes off; they also direct that as few attendants as possible be about the patient. They have frequently observed that when they have been a little slow in getting patients out of the operating room, and the latter become nauseated as a result, they will immediately become quiet and drop into a peaceful sleep as soon as they are carried into the open air and started on their journey. It is the practice of the authors to prepare patients for operation by giving a large dose of castor oil or Epsom salts the night before, and an enema of warm salt solution on the morning of the operation; they also generally administer a hypodermic of morphin, ¼ grain, and atropin 1/150 grain, one hour and a half before the operation. A very light supper of soup or broth is allowed the night before, but no breakfast on the morning of the operation.

Old Dominion Journal of Medicine and Surgery, Richmond, Va.

March

84 Atypical Onset of Typhoid. McC. Tompkins, Richmond, Va.
85 Preventive Medicine. H. B. Hiatt, Asheboro, N. C.
86 Mental Hygiene in Children. P. V. Anderson, Morgantown, N. C.
87 Some Cases Treated with Salvarsan. L. T. Price, Richmond, Va.

Western Medical Review, Omaha, Neb.

April

88 Suggestions for Municipal Measures of Prevention of Invasions of Infectious Diseases. J. M. Banister, U. S. Army.
89 Dyspepsia from a Surgical Standpoint. G. Haslam, Fremont, Neb.
90 Apocynum in Spinal Meningitis. A. O. Peterson, Omaha, Neb.
91 After-Treatment of Appendicitis and Appendiceal Abscess. P. A. Sundbury, Holdrege, Neb.

St. Louis Medical Review

March

92 A Gouty State and its Mimicry. D. W. C. Hood, London, Eng.
93 Where the Physician Must Stand. R. Peter, Chicago.
94 Puerperal Fever. R. J. Smith, Logan, Utah.
95 Tuberculosis; Its Nature, Causes and Prevention. J. B. Huber, New York.
96 Complications of Ileocolitis. A. A. Robinson, Ogden, Utah.
97 Treatment of Varicocele. N. N. Wood, Chicago.
98 Evolution and Science in Medicine. J. L. Wolfe, Cedar Falls, Iowa.
99 The Menopause. M. Hale, Hot Springs, Ark.

Interstate Medical Journal, St. Louis

April

100 *Treatment of Malaria. F. S. Meara, New York.
101 Differential Diagnosis and Treatment of Some of the Common Diseases of the Upper Abdominal Quadrant. W. W. Grant, Denver, Colo.
102 *Unexpected Experiences in Lobar Pneumonia. C. G. Stockton, Buffalo, N. Y.
103 Symptomatology of Congenital Pyloric Stricture in Infants. C. G. Cumston, Boston.
104 *A Safe Guide for the Administration of Tuberculin. O. H. Benker, St. Louis.

100. **Treatment of Malaria.**—Speaking of the use of quinin in malaria, Meara says that there is no question that this drug were better given in solution and, indeed, when the condition of the stomach leads to a suspicion of impairment of function and hydrochloric acid may not be secreted, the solution should be used. The drug is freely soluble in any dilute acid, hydrochloric, sulphuric, phosphoric or tartaric. A minim to the grain is enough. The objection to this method is the intensely bitter taste. Effort may be made to disguise it. One way is to dissolve the dose in a few grains of citric acid (gr. x), in a little lemon juice, add to it water in which a pinch of bicarbonate of soda has been dissolved and take while effervescing. In the tertian or quartan fever of a non-pernicious type, Meara says, the daily dose of quinin to begin with should be gr. xv to gr. xx. In the estivo-autumnal form gr. xxx. In the first mentioned forms, Meara prefers to give, if the patient is seen before the paroxysm, gr. xv of quinin sulphate; if seen during the decline of the fever, the same dose. From

that time on he gives gr. xx, divided into four doses in the twenty-four hours (the dose at the decline of the fever forming a part of it), until the succeeding paroxysm is aborted, then diminishing the dose gr. ii every two days until the dose is reduced to gr. vi a day, for three or four weeks. In the estivo-autumnal forms, he gives the large dose gr. xxx to begin with, and after aborting the paroxysms, reduces to gr. xx or gr. xvii and proceeds in the same way as above. In the pernicious infections, quinin must be used hypodermically or intravenously according to the urgency.

The best salt for hypodermic use, in Meara's opinion, is the acid hydrochlorate, which dissolves in less than its own weight in water. He makes up a solution as follows:

℞	gm. or c.c.		
Hydrochlorate of quinin	5	or	gr. lxxv
Distilled water	10		3ijss

Use 15 minims as a dose, which will contain 7½ gr. of quinin.

The amount needed in the twenty-four hours is about 24 grains, given in divided doses in this way. In the severe but less urgent forms, if given by the mouth, the amount should run up to 30 or 40 grains a day. In most urgent cases, it may be deemed advisable to put the drug into a vein. This may be done in physiologic salt solution. For example:

℞	gm. or c.c.		
Hydrochlorate of quinin	1		gr. xv
Sodium chlorid	0.075	or	gr. i
Water	10		3ijss

Inject all at once into the basilic vein made prominent by a ligature above. Other veins, if more accessible, may be chosen.

102. **Lobar Pneumonia.**—Briefly, the cases reported by Stockton are: (1) Typical lobar pneumonia; marked leucopenia without grave depression; rise of blood-count with defervescence; (2) typical lobar pneumonia and convalescence; three weeks later the patient returned with hyperemia of the lung, fever and serious pharyngitis; abscess, pure pneumococcus culture; (3) pneumonia; acute arthritis; pneumococcus and staphylococcus recovered from blood, staphylococcus vaccine, recovery; (4) chronic valvular disease of the heart, lost compensation, acute arthritis, lobar pneumonia, septicemia, septic endocarditis, pericarditis, hemiplegia; (5) alcoholic, pneumonia, slight involvement, delirium, severe trauma, acute, general pulmonary edema; (6) sudden invasion, high temperature, pulse and respiration, thoracic pain, termination by crisis, physical signs of localized edema.

104. **Tuberculin Administration.**—Benker endorses the method which was advocated and used for a number of years by Sahli.

Alabama Medical Journal, Birmingham

March

105 Early Diagnosis of Cancer of the Stomach. U. J. W. Peters, Birmingham.
106 Nervous Symptoms of Arteriosclerosis and the Removal of the State Causing Them. T. A. Williams, Washington, D. C.
107 Three Cases of Pellagra Treated with Salvarsan. C. M. Nice, J. S. McLester and G. Torrance, Birmingham.

Bulletin of the Johns Hopkins Hospital, Baltimore

April

108 Intermittent Fever in Influenza Simulating Malarial Fever. Grave Malarial Fever With Few Parasites in the Peripheral Circulation. Dangers of the Intravenous Injection of Quinin. W. S. Thayer, Baltimore.
109 The Preparation of Antitoxin. E. J. Banzhaf, New York.
110 *Clinical Value of the Determination of the Catalytic Activity of the Blood. M. C. Winternitz, Baltimore.
111 Distoma Pulmonale in Wisconsin. H. Hanson, Milwaukee, Wis.
112 *Blood Platelets and Megalokaryocytes in Hodgkin's Disease. C. H. Bunting, Madison, Wis.
113 Primary General Peritonitis with Isolation of the *Bacillus Lactis Aerogenes* in Pure Culture from the Peritoneal Exudate. J. W. Churchman, Baltimore.
114 Submucous Resection of the Nasal Septum. S. Rosenheim, Baltimore.
115 *Growth of Embryonic Chick Tissues in Artificial Media. Agar and Bouillon. M. R. Lewis and W. H. Lewis, Baltimore.

110. **The Catalytic Activity of the Blood.**—In his studies of the catalytic activity of the blood in disease, Winternitz followed fifteen cases of typhoid throughout the illness. During the early days of the illness there was no change in the catalytic activity of the blood, but toward the third week there was a gradual fall accompanying the anemia. During convalescence the activity became normal together with the red blood-count. Twelve cases of diseases of the respiratory tract, including lobar pneumonia, tuberculosis and empyema were examined. There was a slight decline in the catalytic activity of the blood during the course of lobar pneumonia. The relation of this decline to the crisis and the salt metabolism of this disease has not yet been determined by Winternitz. In other diseases of the respiratory tract there was no noteworthy variation in the power of the blood to split hydrogen peroxid, except when the disease was accompanied by a severe anemia. In four out of five cases of acute peritonitis examined, there was a characteristic rise in the catalytic activity of the blood. In one a reading had been made before the peritonitis had occurred, while in the other three the increased activity was confirmed by the decline to normal, following operation. In two cases of suspected peritonitis with high fever and leukocytosis, the catalytic activity of the blood was normal, and in these cases the peritoneum was found clean at operation. Diabetes mellitus and catarrhal jaundice exerted no influence on the catalytic activity of the blood. In diseases of the thyroid, both hypothyreosis and hyperthyreosis, the catalytic activity of a single patient's blood was not constant from day to day. In hyperthyreosis the activity tended to increase, while in hypothyreosis the activity assumed a level lower than normal. Winternitz suggests that this may be of significance in interpreting the condition of the thyroid where the signs and symptoms are atypical. In renal, cardiac and cardiorenal cases (twenty-four cases were examined), despite the presence of a marked nephritis, provided there were no symptoms of renal insufficiency (uremial), there was no marked change in the catalytic activity of the blood. In cases of chronic nephritis, accompanied by indefinite symptoms of renal insufficiency the catalytic activity of the blood was irregular from day to day, and tended to assume a level lower than normal. In acute mercurial nephritis there was a fall in the catalytic activity of the blood. With uremic coma there was a marked fall in the catalytic activity of the blood which was permanent if the coma ended fatally, but which recovered when the coma disappeared.

With retention of urine due to obstruction of the lower urinary tract, there was a marked decline in the catalytic activity of the blood. This decline, Winternitz says, may persist for some time, but should the obstruction be removed, the catalase will again rise. Even in severe cardiac disease there is no significant change in the catalytic activity of the blood. In some cases it is high. This may be normal for these individuals, as it will be remembered some individuals have a high activity. In no single case was the activity sufficiently decreased after many readings had been made to suggest renal insufficiency. In three cases of cardiorenal disease, in which the clinical findings suggested a renal insufficiency, the catalytic activity of the blood was normal. At autopsy only a chronic passive congestion of the kidneys, the result of a decompensated heart, was found. In two cases of cerebral hemorrhage the catalytic activity of the blood was high. Whether this is an increase over normal is not known, but it is clear that the high reading would differentiate apoplectic coma from uremic coma.

112. **Blood Platelets in Hodgkin's Disease.**—The findings presented by Bunting would seem to indicate that in Hodgkin's disease there is a special activity of the platelet-producing elements resulting in the production of large numbers of platelets and in the emigration of megalokaryocytes in large numbers from the bone marrow. In the lung capillaries these latter are stripped of their protoplasm, which appears in the peripheral blood-stream in the form of the masses and pseudopodia described. What part this increased platelet production plays in the disease, Bunting is unable to say. There is in the findings a suggestion that the toxin of the disease acts as sharply on the megalokaryocytes as on the lymphoid elements, leading eventually to their necrosis.

115. **Growth of Embryonic Chick Tissues.**—Very wonderful growths from the various organs of embryo chicks of various ages have been obtained by the Lewises. The blood of adult

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chickens was used. Not only were growths obtained in hanging drops, but much more extensive ones were obtained in Petri dishes, the diameter of these growths sometimes exceeding one centimeter. There was great similarity in the growths from pieces of liver, intestine, heart, brain, kidney, adrenal, muscle, stomach, thyroid, retina, cornea, etc., of chick embryos from 10 to 21 days old. Radiating strands, migrating cells, membrane formations and vesicles or loop-like places seem to be common to all. The spleen, however, usually sends off migrating cells alone for some time after the culture is made, and only later do the radiating cells appear, if they appear at all. The general similarity of the growths from the various organs leads the authors to the conclusion that the growing tissues are only such as are common to the various organs, namely, connective tissues of various kinds and endothelium of the blood-vessels. They have been able to trace, in some fixed and stained specimens, the endothelium from the blood-vessels of the original piece out into the new growth where the cells of the endothelial radiations closely resemble the cells of the other radiations found there. Recently, they succeeded in cultivating small pieces of embryonic chicks in a nutrient agar both in hanging drops and Petri dishes. The growths have, as a rule, not been so extensive as those in the plasma, but otherwise resemble them. Some specimens show radiations, others membranes and reticular formations with migration of cells. Mitotic figures are found in the stained preparations. The cells often show long irregular processes and move outward from the old piece. The following medium (Ringer) has so far given the best result with chick tissue:

Sodium chlorid	.9	
Potassium chlorid	.042	
Calcium chlorid	.025	
Sodium bicarbonate	.02	.....10 c.c.
Water	100.	
Agar	.25	
Bouillon		2 c.c.
Sodium chlorid		.0675 gm.

Into a hanging drop of this medium they transplanted two small pieces from the liver of a 9-day chick embryo. Within twenty-four hours cells began to radiate and migrate from the smaller piece into the surrounding medium. In forty-eight hours the growth had exceeded that of the control in plasma and was as extensive as any growth observed in plasma from such a small piece, less than 0.5 mm. in diameter. The entire growth at the end of forty-eight hours was four times the diameter of the original piece and could readily be seen with the unaided eye.

Proctologist, St. Louis

March

116 Rectal and Perirectal Fistulæ. F. C. Wallis, London, Eng.
117 Hypogastric *versus* Iliac Colotomy. F. S. Edwards, London, Eng.
118 Clinical Aspects and Importance of Sigmoid Diverticula. W. H. M. Telling, Leeds, Eng.
119 Chronic Infective Ulceration of the Rectum. H. G. Anderson, London.
120 Submucous Anal Fistula. H. Cripps, London.
121 Treatment of Cancer of the Rectum. H. Drummond, Newcastle-on-Tyne, Eng.

Journal of the Tennessee State Medical Association, Nashville

April

122 •A Supposed Case of Ascites; Echinococcus Cysts? E. M. Beasley, Coal Creek.
123 Tumors of the Urinary Bladder. E. M. Sanders, Nashville.
124 Iritis. R. S. Doak, Nashville.
125 Adenoids. C. B. Wylie, Chattanooga.

122. **Ascites.**—Twenty-one years ago, Beasley's patient, a miner, was kicked by a mule in the right side, over the liver. This gave trouble for some time. Afterward his abdomen began to enlarge, but never gave him any great amount of trouble until January, 1909, when he was unable to go into the mines for six or eight weeks. In August, he was considerably emaciated, complained of some pain over the liver, though no tenderness on pressure. The abdomen was so distended that it was impossible to tell whether the liver was enlarged or not. Diagnosis was ascites caused by cirrhosis of the liver. Beasley gave various hydragogue cathartics and diuretics without any effect. Repeated attempts to aspirate proved futile. Finally operation was advised. On opening the abdomen, the incision filled up with a cheesy mass which soon passed out. After this ½ gallon or more of fluid of an amber color escaped. The incision was then enlarged, when cysts of various sizes from a small marble to a croquet ball, together with a large number of collapsed cysts, began to roll out. It was necessary to rupture a great many of the cysts in order to remove them. The abdominal cavity was completely filled with these cysts. Some of those that were collapsed showed that it had been some time since they ruptured. These cysts had no attachment to anything, but were packed in the abdominal cavity until there appeared no room for more. The small intestines were pressed up against the diaphragm. The peritoneum and all the abdominal organs had a yellow anemic appearance. Their walls were considerably thickened, and had a rough granular feel. The patient died thirty-six hours after operation. Beasley's final diagnosis is echinococcus cysts of the peritoneal cavity.

Journal of Ophthalmology and Oto-Laryngology, Chicago

March

126 Metastatic Gonorrheal Conjunctivitis. W. R. Murray, Minneapolis.
127 Relationship of Rhinology and Orthodontia. A. J. Hill, Canton, Ohio.

Medical Herald, St. Joseph, Mo.

April

128 One Year's Experience in a Neurologic Hospital. J. Collins, New York.
129 •Colica Mucosa. E. H. Thrailkill, Kansas City, Mo.
130 Medical Expert Opinion Evidence, and the Proposed Law Thereon—Medical Expert Opinion is Hard Earned Property. C. H. Hughes, St. Louis.

129. **Colica Mucosa.**—The following classification of these cases is made by Thrailkill. (1) Those due to a motor and sensory neurosis he designates colica mucosa simplex; (2) those due to extra-colonic conditions, causing an interference with the movement of the fecal discharges, he designates colica mucosa reflexa; (3) those due to an extension of an inflammatory process from the rectum or appendix, or when due to the retention of hardened fecal masses, foreign bodies or of the prolonged use of drastic cathartics, causing an inflammatory condition, he designates mucous colitis.

Dominion Medical Journal, Toronto

April

131 Untoward Results of Delayed Operations and of Incomplete Operations. A. Primrose, Toronto.
132 Forecasts of Medical Practice in the Future. T. D. Crothers, Hartford, Conn.

Woman's Medical Journal, Cincinnati

April

133 Arterial Ligation for Irremovable Cancer of the Pelvic Organs. W. S. Bainbridge, New York.
134 •Functional Periodicity in Women and Some of the Modifying Factors. C. Mosher, Palo Alto, Cal.

134. **Functional Periodicity in Women.**—Mosher defines menstruation as a periodic flow of blood from the uterus of a woman, occurring at fairly definite intervals (reckoned from the first day of the onset of the flow to the first day of the next onset) in the same individual, but the intervals varying in different individuals, this function being unattended with pain or incapacity due to it as such. Mosher says that if we can divorce our minds from all preconceived notions in regard to this function, be they derived from individual experience, sex tradition or accepted teachings, and consider it as we do the other periodic functions, this definition will not seem unreasonable. In the first place, she continues, it must be admitted that there is no reason for treating this function differently from the other periodic functions, such as sleep, digestion, defecation and urination, which likewise have their departures from the normal. In the second place, the observers of menstrual disturbances do not by any means agree as to the numbers affected or the degree of the infirmity. Moreover, the various bodies of statistics giving the percentage of women suffering at the menstrual period have all been based on single statements from women examined. Mosher is convinced that many of the so-called dysmenorrheas are not dysmenorrheas at all, but coincident functional disturbances in other organs. It is highly suggestive that the symptoms coincident with low blood-pressure usually are slight, in busy, active women, as in men. When the attention is of necessity directed to so obvious a process as the menstrual flow, untrained women,

especially if without absorbing occupation, naturally refer their lessened sense of well-being and diminished sense of efficiency, which may accompany the lowered general blood-pressure occurring near or at the menstrual flow, to the function of menstruation.

In a group of average women, Mosher has produced a marked improvement at the menstrual period by using so simple a measure as deep breathing. All constricting dress having been removed, the women, in the recumbent position and with knees flexed to relax the abdominal muscles, have done deep breathing once or twice a day during the menstrual period, with the result that all pelvic sensations, depressions and minor symptoms usually included in the term dysmenorrhea have disappeared. In a number of cases also the period has been shortened more nearly to conform to the period of principal flow. These experiments, Mosher thinks, tend to emphasize still further that the upright position, the force of gravitation and constricting dress are conjoined factors in hindering the circulation of the blood from the pelvis to the heart, and are therefore important factors also in producing dysmenorrhea. Since in women of the uncivilized races we find the minimum of flow with no disability and perfect functioning, there can be no danger in gradually lessening by such physiologic methods the period of prolonged pelvic congestion.

American Journal of Surgery, New York

April

135 Duodenal Ulcer. R. T. Morris, New York.
136 Eleven Successful Operations for Fractured Femur. J. B. Walker, New York.
137 Deformities of the Nasal Septum and Their Correction. C. G. Crane, Brooklyn, N. Y.
138 Surgery of the Thyroid. J. E. Jennings, Brooklyn, N. Y.
139 Local Anesthesia. A. E. Hertzler, Kansas City, Mo.
140 Bismuth Paste in Mastoid Surgery. C. J. Imperatori, New York.
141 Cholelithiasis and Cancer of the Gall-Bladder Involving the Abdominal Wall. W. H. Luckett, New York.
142 A Case of Supernumerary Spleen. A. W. Blain, Detroit, Mich.

Journal of Abnormal Psychology, Boston

April-May

143 Psychotherapy and Re-Education. J. E. Donley, Providence, R. I.
144 Influence of Dreams on Waking Life. E. Jones, Toronto.
145 *Detection of a Case of Simulation of Insanity by Association Tests. E. W. Katzen-Ellenbogen, Boston.
146 The Psychopathology of Hysteria. I. H. Coriat, Boston.

145. Detection of a Case of Simulation of Insanity.—In the case reported by Katzen-Ellenbogen, the association test proved very satisfactory. In his general discussion of the subject the author points out that psychology, even in its present adolescent state, can be of assistance in problems of practical life, although it would be entirely wrong to contend that by the association test the truth of a person's statement could be positively determined. Indeed, if the association test were to be used for this purpose, he should prefer to refrain from the use of it altogether. He believes, however, that by skilful application to certain cases, the association test may prove a very valuable addition to many tests in criminal investigating work, as has been lately shown by the Bertillon methods, etc., and be of great assistance in many instances for clearing away doubts as to the truthfulness of witnesses.

In the case under review Katzen-Ellenbogen worked with a man wholly unprepared and incapable of understanding the purpose of the investigation, ignoring the facts that a hesitation, the change of word in the reproduction, were the very instances which would most convincingly tell against him. Considering even the circumstance of his knowing these facts, of his even being a psychologist quite skilful in psychologic technic, he would be equally unable to control the form of his answers and the time of associations, even to a fraction of a second. The attempt to control his answers or prepare them beforehand would incriminate him more than anything else. In this same way a refusal to cooperate might be equally harmful as a result. This argument in favor of the association test is rather directed to the sceptical students of law, as the psychologists themselves are more inclined toward an optimistic than a pessimistic view of the success of these tests. The criminal himself would hardly object to this form of investigation, as it would rather impress him with the fact of his having been cleverly overtricked; to the very end both he and the examiner are able to remain on friendly terms, as it happened in the case reviewed.

Albany Medical Annals

April

147 What is Psychotherapy? N. A. Pashayan, Schenectady, N. Y.
148 Surgical Treatment of Goiter. E. MacD. Stanton, Schenectady, N. Y.
149 Carcinoma of the Stomach, Gall-Bladder, Pancreas and Ducts. W. P. Faust, Schenectady, N. Y.
150 Mucous Disease. C. F. Clowe, Schenectady, N. Y.
151 Differential Diagnosis of Early Carcinoma of the Stomach and Benign Subacidities. J. Meyers, Albany, N. Y.

Archives of Ophthalmology, New Rochelle, N. Y.

March

152 A Useful Addition to the Test Chart. E. F. Snydacker, Chicago.
153 Two Cases of Interstitial Keratitis of Sympathetic or Syphilitic Aspect. J. Santos-Fernandez, Havana, Cuba.
154 Optic Atrophy from Traumatic Asphyxia. F. J. Parker, New York.
155 Early Changes Occasioned by the Invasion of the Eye by the Cysticercus. G. Cirincione, Palermo, Italy.
156 Traumatic Enophthalmus. A. Birch-Hirschfeld, Leipsic, and Meltzer, Wedel.
157 Influence of the Accommodation on the Ocular Tension in Vertebrates. C. Hess.
158 Comparative Studies of Miosis Due to Light and to Convergence, and of the Action of Atropin and Eserin on the Iris and Ciliary Muscle, with Remarks Concerning the Form of the Pupil. F. Kanngieser, Marsburg.
159 Extent of the Pupillo-Motor Area of the Retina. F. Best, Dresden.
160 A New Method of Examination for Double Images. W. Hess, Zürich.

Buffalo Medical Journal

April

161 Recent Views Concerning Treatment of Cancer, Based on its Nature. R. Park, Buffalo.
162 The Midwife. P. W. Van Peyma, Buffalo.
163 Double Inguinal Strangulated Hernia in a Cryptorchid. L. G. Hanley, Buffalo.

Journal of Cutaneous Diseases, New York

April

164 Pellagra in Ohio. W. T. Corlett and O. T. Schultz, Cleveland.
165 A Fatal Case of Bullous Dermatitis. S. Pollitzer, New York.
166 Problems in Metabolism Occurring in Patients with Certain Diseases of the Skin. L. D. Bulkley, New York.
167 Prurigo, and the Papule with the Urticarial Basis. O. H. Holder, New York.

St. Paul Medical Journal

April

168 Christian Science. J. Knott, Dublin, Ireland.
169 Antituberculosis Work in Minnesota. C. Easton, St. Paul.

Louisville Monthly Journal of Medicine and Surgery

April

170 A Dozen Obstetrical Don'ts. J. G. Cecil, Louisville.
171 Ethmoiditis. S. G. Dabney, Louisville.
172 Cancer of the Stomach with Gastrectomy. C. G. Lucas, Louisville.
173 The LaForce Adenotome. S. G. Dabney, Louisville.

Mississippi Medical Monthly, Vicksburg

April

174 The Puerperium. L. C. Feemster, Nettleton.
175 An Untilled Field in Eye Work. E. C. Ellett, Memphis, Tenn.
176 The County Society. A. J. Newman, Acona.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

March 25

1 Indigestion. G. Rankin.
2 Hour-Glass Contraction of the Stomach. R. P. Rowlands.
3 *Acute Dilatation of the Stomach; Gastrotomy; Recovery. G. G. Farquhar.
4 *Treatment of Appendiceal Abscess with Pure Phenol and Iodoform. A. E. Mayland.
5 A Case of Idiopathic Dilatation of the Colon. W. Leggett.
6 *Experiments on Cold-Chamber Treatment. J. G. Thomson and R. Ross.
7 *An Analysis of 326 Cases of Asiatic Cholera. H. Stevens.
8 The After-History of Thirty Cases of Movable Kidney Treated by Operation. A. R. Short.
9 The "Cardio-Splanchnic Phenomenon" of Abrams. W. Gordon.

3. Dilatation of the Stomach.—Nearly all the recorded cases of acute dilatation are alike in obscurity of cause and fatality of termination. Farquhar cites a case in which one cause was not only clear, but removable, and the result was uninterrupted recovery. A young woman, aged 23, was advised

by a "wise woman" to eat figs in order to burst a small abscess in the axilla. She ate nearly a pound of dried Turkey figs at 11 a. m., Dec. 24, 1910. Two hours later, ineffectual retching set in with abdominal pain, which continued with increasing severity all day and the following night. The bowels moved slightly in the evening. The girl had several alarming attacks of breathlessness in the night. Farquhar was summoned at 9 a. m. the next day. The abdomen was not distended, and moved slightly with respiration. There was a general slight increase of resistance and a diffuse tenderness, most noticeable between the umbilicus and the left anterior superior spine. The pain had come on gradually and was now severe, especially in the epigastrium, but also in the left iliac region. The pulse was 84 and the temperature normal. After examination she sat up with a sudden cry and gasped for breath; the pupils dilated fully, and showed momentarily a slight red reflex. For about ten minutes she looked as if she might fall back dead. When she regained her breath, a little brandy and water was given and she began to retch, but only a little fig pulp came up. As this seemed too thick to flow through a stomach tube, none was passed lest it should provoke another attack of dyspnea. One hour later, a slightly distended dull area could be made out below and to the left of the umbilicus. An enema of soap and water was ordered and hot applications to relieve the pain, but no morphin was given at this stage.

Twenty-nine hours after the onset of pain and vomiting, the abdomen was opened. A large swelling like an ovarian cyst presented in the wound. It was tympanitic above but dull below, and was found to fill the whole of the front of the abdomen. It was recognized as an enormously distended stomach, the greater curvature being hidden below the pubis, and the lesser curvature appearing like a vertical chink between the inflated halves of the organ. The dilatation seemed to extend to the second stage of the duodenum. An area of the stomach was drawn forward and packed off with gauze from the peritoneal cavity. A small incision was made to allow gas to escape. Fluid containing fig juice and emitting a strong vinous odor, flowed freely for a time, and then masses of half-masticated figs were removed with a scoop. The pylorus and the first part of the duodenum were found to be dilated sufficiently to admit three fingers. When all the contents had been removed, the stomach contracted gradually till the greater curvature was just below the umbilicus. The wound in the stomach was closed in three layers, and the abdominal wall brought together in the usual way without drainage. Recovery was uneventful and complete.

4. **Treatment of Appendiceal Abscess.**—The striking inhibitive effects of phenol when used for external conditions led Maylard to venture on its employment in cases of appendiceal abscess in which the extreme offensiveness of the discharge and the necrotic processes in the appendix suggest conditions not altogether unlike those met with in traumatic gangrene. The abscess cavity is freely wiped with a small gauze swab soaked in pure phenol. An effort is made to reach every part of the cavity. A dry swab is then introduced to soak up any of the remaining acid, and immediately thereafter any amount, up to a half a teaspoonful, of iodoform is put into the cavity, and with a blunt instrument smeared over its walls. A rubber drainage tube about a quarter of an inch in diameter is conducted to the lowest part of the cavity, and on one side of the tube a narrow strip of iodoform gauze is packed in zigzag fashion, just sufficient to fill the cavity; this, with the tube, is conducted out of the abdomen about the center of the wound. The after-treatment is as follows: On the second day after the operation, the iodoform gauze packing is partially removed; on the third day it is completely removed; and, however fetid may have been the pus at the time of operating, the plug will be found to be perfectly "sweet." On the fifth or sixth day the drainage tube is taken away, and on the tenth day the stitches are removed. At the end of four weeks the patient is allowed up.

In sixteen out of the twenty-seven cases cited by Maylard, the abscess was reached by the ordinary "gridiron" incision, neither muscle nor aponeurosis being divided across the direction of the fibers. In twenty-five cases out of the twenty-seven, the appendix was sought for and removed. In one of the remaining two it was only partially removed, as a portion had disappeared, while in the other it could not be found. Every patient recovered, and in none were there any subsequent complications, such as subdiaphragmatic abscess, pylephlebitis, pneumonia or other conditions suggestive of septic absorption or local accumulations of pus. The pulse and temperature usually fell within twenty-four hours. The subsequent results of operation were traced in twenty-five out of the twenty-seven cases, and nineteen of these twenty-five patients were seen and examined. With the exception of the twenty-seventh patient, who had only been operated on a month previously, the interval between operation and report ranged from three months to four and three-quarter years. An examination of these results shows: 1. When the "gridiron" incision was employed, in ten out of fourteen cases there was some bulging of the cicatrix, mostly slight and in almost every instance at the place where the drainage tube and gauze packing emerged. 2. When the internal oblique and transversalis muscles were cut across by extending the incision upward, three out of six cases showed bulging, the protrusion being in one case at the seat of exit of the drainage tube, and in the other two at the lower part of the cicatrix. 3. When the internal oblique and transversalis muscles were cut across by extending the incision downward and inward, the three cases so treated showed bulging. Maylard is convinced that, when proper precautions are taken to protect the general peritoneal cavity, this method of operating admits of every abscess being opened and every appendix sought for and removed with perfect safety. This method prevents any subsequent septic complications, such as subdiaphragmatic abscess, pylephlebitis, pneumonia, thrombosis and other septic manifestations connected either with the wound locally or with deeper and more distant parts. As drainage is considered advisable in every instance, the probabilities are in favor of a weakened cicatrix at the seat of exit of the tube and gauze, with, later, hernial protrusion; but, provided the incision is of the "gridiron" variety, with no cross division of muscle or aponeurotic fibers, and neither the tube too large nor the packing excessive, the bulging may be only slight.

6. A similar article by these authors was abstracted in THE JOURNAL, Sept. 10, 1910, p. 973.

7. **Asiatic Cholera.**—Of 326 cases of cholera occurring in the Funchal epidemic treated in the Isolation Hospital, Funchal, Madeira, in roughly 75 per cent. there was an acute onset; in many it was fulminating. In the remaining 25 per cent. the onset was gradual. The duration of symptoms in those individuals who recovered was from three to ten days. In only 5 per cent. of the cases were cramps in the legs and abdomen absent. After acute symptoms had passed off, about 3 per cent of the patients went into a condition resembling typhoid, with tympanites, slight secondary diarrhea, headache and temperature above 101 F. for more than a week. Some of these gave the Widal reaction in the stronger dilutions, but they all recovered within a fortnight. About 10 per cent. of the patients were chronic alcoholics, and this class of the community seemed especially prone to take the disease. Of the female patients fully 10 per cent. were lactating, which seems a high percentage. There were also five pregnant women among the patients. Of these, four aborted, two between the second and third month and two between the sixth and seventh month; two died, but without any puerperal complications. Among the 326 patients, there were thirty infants under 3 years of age and forty-two persons over 60. The epidemic, comprising about 1,700 cases for the whole island of Madeira, has been disseminated entirely by food and actual contact, and not by means of water supply. It was stamped out by rigid isolation or segregation of all "contacts." Systematic examination of the feces was carried out in the case of all convalescents, all inmates of the "contacts" segregation block, and all hospital employees. Of the 206 convalescents, twenty carried the vibrio in the feces for more than a fortnight after the disappearance of the active symptoms. Out of about 350 inmates of the "contacts" block, only six actually developed the disease, but many who never showed symptoms were found to carry the vibrio in the feces for more than three weeks after being in contact with a patient.

Lancet, London

April 1

10 Ankylostoma Infection. A. E. Boycott.
11 *Diagnosis of Gall-Stones. J. Sherren.
12 Congenital Abnormality of the Heart; a Case of Cor Trilocular Biatriatum. J. I. Robertson.
13 *Slight General Enlargement of the Thyroid as Found in School Children. C. W. Hutt.
14 The Fading of Aniline-Stained Microscopic Preparations. A. C. Coles.
15 Extensive Blistering Occurring in an Infant; Diagnosis of Scurvy. S. Bott.
16 *Experiments on Inhibition of Tumor Growth in Rats and Mice, with a Suggestion for an Empirical Treatment in Man. A. S. Grünbaum.

11. **Diagnosis of Gall-Stones.**—Of forty-three patients suffering from gall-stones and operated on by Sherren during the past two years, twenty-six had had indigestion, for which they had been under medical care for long periods; one patient after being treated for gastric ulcer was sent to the hospital on the occurrence of her first attack of colic as a case of perforated gastric ulcer. Another patient had had gastro-enterostomy performed without relief; at operation, Sherren removed 140 small stones from the gall-bladder and one from the common bile-duct. Of these twenty-six patients, twenty had had attacks of biliary colic after periods of indigestion ranging from five months to forty years; in the majority of the cases the history of indigestion was of over five years' duration. The special points in the dyspepsia due to biliary calculi Sherren believes are these: its association with flatulent distention; the frequency with which the patient is awakened at night; the pain is not relieved by taking food, and if associated with vomiting this may not relieve it, but vomiting is unusual. Abdominal examination in these cases may settle the diagnosis; for example, in two of the cases in which Sherren operated, before the onset of colic a distended gall-bladder was distinctly palpable. Tenderness under the right lower ribs is usually present and Murphy's sign may be elicited. Occasionally no physical signs exist. A large proportion of all cases of duodenal ulcer give symptoms enabling a certain diagnosis to be made, the most important being hunger pain relieved by taking food and waking the patient in the early hours of the morning. In these cases the ulcer is in the first part of the duodenum. These symptoms are never produced by gall-stones. There are cases, however, in which the symptoms of gall-stones are mimicked closely by those due to an ulcer in the second part of the duodenum. Cases of this nature are, however, unusual. Among the forty-six cases of chronic duodenal ulcer that Sherren has operated on before perforation has taken place, the symptoms in three simulated those due to gall-stones, and in these the ulcers were situated in the second portion of the duodenum.

13. **Enlargement of Thyroid.**—Hutt calls attention to the fact that slight general enlargement of the thyroid is fairly common in some districts. The number of cases investigated, unfortunately, does not warrant any very definite conclusions.

16. **Inhibition of Tumor Growths.**—On the assumption that some kind of protective substance might be formed in animals affected with epithelioma, the authors injected the serum of a mare having epithelioma of the vulva into some cases of cancer, more especially one of uterine cancer. A violent reaction followed each injection (which was made locally), and the case was modified from an inoperable to an operable condition. Both operation and further treatment were refused, and when the patient returned later, renewed treatment with the serum from another mare failed to reproduce the former effect. Later experiments showed that in rats, regression of inoculated growths may follow the injection of epitheliomatous horse serum and also of simple horse serum, and that this regression occurs in the greater proportion of treated than of untreated rats. Another quite different series of experiments revealed the curious and interesting fact that it was not possible simultaneously to produce immunity against cobra venom and to retain susceptibility to new growth inoculation in mice and rats, nor, conversely, after successful inoculation with tumor, to produce immunity to cobra venom. If the tumor were already present, and continued to enlarge, the animal succumbed to a few ordinarily sublethal doses of cobra venom. On the other hand, in those animals in which immunity could be established, growths which had already reached a size of 1 cm. in diameter would regress.

The inference from this series of experiments was that if the treatment caused the regression, such regression must be due to some antibody or antibodies formed as the result of this active immunization. If this were so, passive immunization with antivenom serum should produce similar effects. Therefore, a series of animals with well-grown tumors was treated with antivenom serum. Regression took place only when the growths had not exceeded about 1.5 cm. in diameter. The authors feel that the results of these experiments warrant the extension of the treatment to human beings, and at the same time show that quite inoperable cases are not fair subjects for such trial, for it seems not unlikely that similar limitation to that seen in rats will exist in the case of man. Three human patients have already received treatment by combined passive and active immunization, but since the mass of tumor was large in each case and was not excised, they were not fair cases for the purpose, although they showed that the treatment in itself was harmless. It is not possible to state whether any lasting effect was produced on the growths, since the patients left the hospital too soon for the formation of a definite opinion.

Annals of Tropical Medicine and Parasitology, Liverpool

March

17 Pathology of Lesions of the Cornea and Skin in Animal Experimentally Infected with T. Rhodesiense. W. Yorke.
18 A Case of Sleeping Sickness Studied by Precise Enumerative Methods. R. Ross and D. Thomson.
19 Trypanosoma Gambiense and Trypanosoma Rhodesiense in Rats, Guinea-Pigs and Rabbits; Periodic Variations Disclosed. H. B. Fantham and J. G. Thomson.
20 Life-History of Trypanosoma Gambiense and Trypanosoma Rhodesiense as Seen in Rats and Guinea-Pigs. H. B. Fantham.
21 Experiments on the Treatment of Animals Infected with Trypanosomes by Means of Atoxyl, Vaccines, Cold, Roentgen-Rays and Leukocytic Extract; Enumerative Methods Employed. R. Ross and J. G. Thomson.
22 Auto-Agglutination of Red Blood Cells in Trypanosomiasis. W. Yorke.
23 A New Genus of Culicinæ from the Amazon Region. R. Newstead and H. F. Carter.

Australasian Medical Gazette, Sydney

February

24 The Work of the Southern District (Australia) Medical Association. H. Stoker.
25 Local Features in Occurrence of Eye Disease. C. G. MacLeod.
26 Endemic Hematuria or Illawarra Red-Water in Bovines and Its Possible Ocurrence in Man. J. B. Cleland.
27 Open Ethyl Chlorid Anesthesia for Minor Operations. R. W. Hornabrook.
28 Pathogeny of Ulcerating Granuloma. C. L. Strangman.
29 *Pneumonia Due to a Gram-Negative Diplococcus. A. S. Vallack.
30 Biologic Properties of the Cholera Vibrio and Other Vibriones. B. Bradley.

29. **Pneumonia Due to a Gram-Negative Diplococcus.**—About thirty cases of pneumonia due to this coccus have come under Vallack's notice, and the features of the disease have been so characteristic that there is little difficulty in differentiating it from pneumococcus pneumonia. In cases of pneumonia due to the pneumococcus, as a rule, only one member of the household is attacked. In the case of pneumonia due to the Gram-negative coccus, other members of the household are attacked by the same germ. The onset of ordinary pneumonia occurs with the greatest suddenness. With the other coccus the onset is not sudden; the patient is ill for several days with catarrh of the upper respiratory tract before the pneumonia supervenes. The temperature of ordinary acute pneumonia is perhaps more characteristic than that of any other disease. In the other disease the rise is more gradual, reaching high-water mark about the third day. The fall is by lysis, and it may take from two to six days or more to accomplish. The toxins of this germ are not nearly so depressing to the heart as those of the pneumococcus. A fair amount of pain may be present, but Vallack has not seen in any case the agonizing pain which may be present in pneumococcus pneumonia. A remarkable difference in the two affections is seen in the comparative absence of distress in this disease. A patient with one whole base consolidated will lie in bed with comparative comfort. The sputum is much more scanty as a rule than in the pneumococcus disease, and may be entirely absent even when considerable consolidation is present. When present it

is of a rusty color and contains numbers of encapsulated diplococci. These are often in large groups comprising fifty or more. They are decolorized by Gram's method. The physical signs of a fully developed case are similar to those of ordinary pneumonia. The stage of suppressed breath-sounds, however, which is common to both diseases, often lasts a good deal longer in this disease than in that due to the pneumococcus. One may find places where the breathing is still suppressed several days after the onset of the disease, while in other places tubular breathing is present. The disease is much less fatal than pneumococcus pneumonia, chiefly owing to the effects of the latter on the heart. Vallack emphasizes that this disease is infectious, and patients should not be admitted to the wards with other patients. Occasionally a patch of this pneumonia takes some time to clear up, giving rise to a suspicion of tuberculosis.

Australian Medical Journal, Melbourne

February

31 Hydatid Disease of the Lung. F. D. Bird.
32 Diagnosis and Treatment of Pulmonary Hydatids. G. T. Howard.
33 Pulmonary Hydatids. D. M. Morton.
34 Prognosis and Treatment of Hydatid of Lung. J. Cooke.
35 A Case of Mediastinal Hydatids. M. L. Williams.
36 The Work of an Army Medical Corps in the Time of War. C. H. W. Hardy.

Practitioner, London

April

37 Hodgkin's Disease, from the Surgical Point of View. Sir F. Eve.
38 Hodgkin's Disease and Intermittent Pyrexia. F. de H. Hall.
39 Aspects of Lymphadenoma (Hodgkin's Disease). H. D. Rolleston.
40 *Low Blood-Pressure. W. Edgecombe.
41 A Case of Splenic Abscess; Operation; Recovery. G. N. Pitt and C. H. Fagge.
42 Obesity. L. Williams.
43 Septic Infection of the Intracranial Sinuses. W. Taylor.
44 Treatment of Progressive Descent of the Uterus. E. Scott-Carmichael.
45 Radiographic Demonstration of Lane's Ileal Kink. A. C. Jordan.
46 A Case of Acute Phlegmon of the Pharynx. J. Harper.
47 Immediate Treatment of Retention of Urine in the Male. W. Edmond.
48 Three Cases of Peroneal Paralysis. W. B. Jack.

40. **Low Blood-Pressure.**—Individuals presenting low blood-pressure, Edgecombe says, are subjects with poor circulation, cold hands and feet, and liable to chilblains. He has encountered several examples in which the systolic blood-pressure rarely rose above 95 mm. Hg. By means of baths, massage and exercise, a temporary rise may be effected, during the maintenance of which the objective and subjective signs of defective circulation improve manifestly; but it is difficult to effect an enduring rise in the general level of blood-pressure in these cases, for they are prone, on cessation of treatment, to relapse to their former state. In cases of pure neurasthenia, having as their prominent characteristic, profound fatigue either somatic or psychical, or both, the blood-pressure is also low. A woman had a systolic pressure of only 85 mm. sitting, and 80 recumbent; she was subject to most violent headaches and had been dosed freely and for long periods with the usual headache remedies. A rise in tension of the circulation temporarily afforded relief to the pain. Whether the low blood-pressure in these cases of neurasthenia is the cause or the effect of the extreme fatigue, Edgecombe says is not easy to say. The probable sequence of events is a lowering of blood-pressure by toxic or other causes, and it is the extreme feebleness of the circulation that gives rise to the subjective sensation of intense fatigue. Certain it is that a rise in blood-pressure is an almost invariable accompaniment of improvement. In marked contrast to these is the irritable type of neurasthenic—the "neurotic" individual, who is frequently not a true neurasthenic, but a psychasthenic or a hypochondriac. In these cases the pulse is usually quick and irritable, and the blood-pressure subject to great variation, but generally above the normal and sometimes markedly so. Tobacco raises the blood-pressure and yet heavy smokers frequently have subnormal pressure. In cases of dilated heart, with or without valvular disease, the pressure will sometimes be found low, and a rise in pressure is one of the indications of the progress of the case toward recovery.

Edgecombe has seen many examples of the so-called gouty or rheumatic manifestations—lumbago, sciatica, neuritis—which showed a blood-pressure somewhat below normal. Many of these patients have a subnormal acidity of the urine, and are liable almost constantly to a copious deposit of phosphates; and this leads to, or is accompanied by, a state of nervous depression, which is a very real thing to those who suffer from it. The origin of the diminished acidity is digestive, and the nervous depression is due to reflex disturbance from irritation of the sensitive nerve mechanism of the bladder and urethra by the phosphatic urine. It is remarkable how rapidly the blood-pressure will rise and the symptoms disappear if the urine is rendered acid and the phosphates kept in solution. The clinical symptom phosphaturia, in whatever condition it may occur, is usually accompanied by a low blood-pressure, probably for the reason given above. Subacute cases of rheumatoid arthritis in young subjects frequently have a blood-pressure below normal, which rises as the condition improves. Exercise, carefully graduated, improves the tone of the heart and vessels and raises the pressure, while altitude and baths have a marked effect in the same direction.

Annales des Maladies des Org. Génito-Urinaires, Paris

March, XXIX, No. 5, pp. 385-480

49 *Polycystic Disease of the Kidney. (Les reins polykystiques.) Pousson.
50 Segregation of the Urine in the Female Bladder. (Un instrument qui rend exacte l'application du séparateur de Luys chez la femme.) D. Taddei.

49. **Polycystic Kidney.**—Pousson reports good results from operative treatment of polycystic degeneration of the kidney in three typical cases and fair results in forty-two others. The operations do not cure completely, he remarks, but they combat the accidents and complications which increase the gravity of the condition and threaten life. The indications for operation are compression of neighboring organs, pain, hematuria, uremia, oliguria, anuria or suppuration. Nephrotomy is the preferable operation. One patient, a carpenter, is in comparatively good health to-day after nephrotomy early in 1908; he had long suffered from gall-stones. The left kidney was in advanced cystic degeneration. During the three years since the nephrotomy the man has been free from all pain and has worked constantly. In another case, the nephrotomy was done for oliguria, headache, cramps and other symptoms of mild nephritis. Pousson ascribes the affection to some inflammatory process, possibly traceable to some acute infectious disease or alcohol or lead poisoning, the gouty tendency or malaria. The assumption of a causal inflammatory process harmonizes further with the clinical course of the polycystic affection. Nephrectomy should be reserved for the tuberculous cases.

Archives Générales de Chirurgie, Paris

February, V, No. 2, pp. 121-240

51 *Cancer of the Kidney in Two Little Girls. R. Buccheri.
52 Favorable Significance for Prognosis of Early Meteorism After Trauma of the Abdomen. D. G. Zesas.
53 *Sigmoiditis and Infection of the Internal Genitalia in Women. J. Poulain. Commenced in No. 1.

51. **Cancer of the Kidney.**—The cancers were a sarcoma and an epithelioma, both inoperable; the patients were 2 years and 7 months and 3 years old respectively. There was no history of traumatism, and the children were otherwise apparently normal.

53. **Sigmoiditis and Infection of Internal Genitalia in Women.**—Poulain warns that disease of the genital apparatus is very liable to spread to the sigmoid flexure. The microbes find their way by the peritoneum and induce production of adhesions which may cause serious trouble later. On the other hand, inflammation in the sigmoid region as a result of constipation may involve the genitalia and may cause misleading symptoms on the part of the ovaries or Fallopian tubes. These facts explain the predominance of left salpingitis. Whenever the adnexa are presenting symptoms of inflammation, the pains being most pronounced on the left side, he advocates hot intestinal enemas rather than vaginal injections, as, while they have practically the same therapeutic action, they permit

energetic disinfection of the sigmoid flexure. He insists that this should be done systematically before attempting to operate in case of salpingitis or for ovarian cyst, etc. These conclusions are based on nineteen cases, including six from his own experience reported in detail with summaries of the others.

Bulletin de l'Académie de Médecine, Paris

March 14, LXXV, No. 11, pp. 351-385

54 Three Cases of Abscess in the Brain Consecutive to Abscess in the Liver. Coutaud and Peyrot.
55 New Name for Malta Fever. (Sur le nom de Mélitococcie à donner à la fièvre de Malte.) R. Blanchard, Chauffard, Benjamin and F. Widal.
56 Case of Laboratory Infection with Malta Fever. F. Widal.
57 Apparatus for Mixed Anesthesia. (Méthode des mélanges titrés pour l'anesthésie chloroformique.) P. Reynier.
58 Amblyopia with Strabismus; Disuse Its Cause and Exercise Its Cure. (De l'amblyopie strabique.) Lagrange.

Bulletins de la Société de Pédiatrie, Paris

February, XIII, No. 2, pp. 65-107

59 *Infant Feeding. (La ration alimentaire du nourrisson.) J. Comby.
60 *Idem. (Hypoalimentation du nourrisson et insuffisance qualitative de la secrétion mammaire de la nourrice.) E. Gaujoux.
61 Idem. (Les nourrissons hypoalimentés, leurs vomissements, leur réalimentation.) J. Lemaire.
62 Technic for Repair of Cleft Palate. (Division congénitale du voile du palais.) V. Veau.
63 *Persisting Thymus and Mediastinal Adenitis. (Hypertrophie du thymus et adénites médiastinales.) V. Veau.
64 *Sterilization of Abscess Cavities. (Lavage des poches d'abcès froids et chauds.) Ombrédanne.
65 Emotional Jaundice in Children. (L'ictere émotif chez l'enfant. Observation d'un cas suivi d'une petite épidémie familiale d'ictère infectieux.) P. Merklen.

59. **Infant Feeding.**—Comby emphasizes the importance of studying individual conditions, but his general rule is 100 gm. of good milk to the kilogram of weight when the infant is strong and well. This amount represents only 75 calories per kilogram, that is 34 calories per pound of weight, and this is not sufficient for weakly infants or the very young. These need 95 or even 100 calories per kilogram, which would require 120, 130 or 150 gm. of milk.

60. **Id.**—Gaujoux makes a point of analyzing the breast milk when a child is not thriving and states that a woman can increase the amount of milk from one-sixth to one-third by drinking fluids but the nourishing value of the milk is reduced in proportion. He warns further that infants fed artificially may not be getting the proper amount of nourishment as the mothers dilute the milk as directed, not realizing that the milkman has previously watered it.

63. **The Thymus and Glandular Disease in the Chest.**—Veau has removed the thymus in nine cases for disturbances in breathing for which the enlarged thymus was supposed to be responsible. But in two cases, notwithstanding the signs of thymic obstruction and difficulty in breathing and swallowing, attacks of suffocation and dulness over the manubrium, the thymus was found quite small. The whole trouble was an infected gland behind the sternum which Veau easily removed, the operation being followed by complete functional success. Removal of glands above the bifurcation of the trachea, behind the brachiocephalic vein, was very easy by this route which permitted also draining of the upper mediastinum. In these cases of supposed enlargement of the thymus an acute pulmonary affection had preceded the disturbances. In future, he says, he will look for mediastinal adenopathy instead of ascribing the subglottic stenosis exclusively to the thymus in such cases. Another sign that might have been instructive, if heeded, was that the difficulty in breathing seemed to be predominantly below the diaphragm; there was only a little above the clavicle and none above the sternum. The organs in the mediastinum were adherent from the preceding inflammation, so that there was no movement when the chest was opened. These adhesions explain the discordance between the diaphragmatic and cervical difficulty in breathing and this lack of agreement between them should suggest, Veau declares, infection of glands rather than enlargement of the thymus.

64. **Lavage of Abscesses.**—Ombrédanne gives an illustrated description of a puncture device connected with three jars and a bulb with which it is possible to aspirate the contents of an abscess, rinse it out and follow this with a disinfectant, all without changing the cannula. The apparatus can be used also for treating a suppurating gland in the neck, but for this he supplements it by drawing silk through the abscess to make an aseptic seton. The needle can be inserted in the silk and a quart of cleansing fluid sent through the lesion, followed by an iodin solution. The lesion is thus healed with merely two minute incisions, one above and one below.

Lyon Médical, Lyons

March 12, CXVI, No. 11, pp. 449-512

66 Serotherapy of Typhoid. A. Rodet. Commenced in No. 10
67 Technic for Induced Pneumothorax in Treatment of Pulmonary Tuberculosis. P. Courmont.

March 19, No. 12, pp. 513-552

68 Difficulty in Estimating Extent of Injury in Industrial Accidents Involving the Eye. E. Grand-Clement.

Presse Médicale, Paris

March 18, XIX, No. 22, pp. 209-220

69 *Cultivation of Tissues in Vitro. A. Carrel and M. T. Burrows (New York).
70 *Total Resection of Superficial Idiopathic Varices on the Legs. P. Alglave.
71 Spasm of Esophagus. (Ce que doit être actuellement la conception des spasmes de l'oesophage.) Guisez.

March 22, No. 23, pp. 221-228

72 Laws Regulating the Balance in the Cardiovascular System. A. Martinet.
73 Instrumental Re-Education of the Ear. (La rééducation de l'oreille chez les sourds et sourds-muets par l'emploi d'un appareil microphonique.) E. Laime.

69. **Growth of Tissue in Vitro.**—Carrel and Burrows here review their work in this line, which is already familiar to the readers of THE JOURNAL. Some of their most recent communications on the subject were published in THE JOURNAL, Jan. 7, 1911, and in the *Journal of Experimental Medicine*, March, 1911.

70. **Resection of Superficial Varices.**—Alglave summarizes his experience with total resection of superficial idiopathic varices in seventy-five cases. This operation restores working capacity and seems to be equally beneficial for the painful and complicated cases and for the less serious. The incision runs from ankle to groin, on the inner aspect of the leg, and the author advocates the operation in every case in which the varices begin to prove painful or annoying. There is no need to wait, he asserts, for subsidence of the phlebitis; but in this case he always ligates under local anesthesia the terminal segment of the internal saphena before operating on it, to avoid danger of embolism. In his cases the temperature dropped at once after resection of the inflamed veins, showing that the trouble was limited to the vein. In varicose ulcer, he resects a lozenge-shaped flap of skin with the segment of the vein, with Thiersch flaps in the rare cases in which there were no signs of healing after ten or twelve days.

Revue de Médecine, Paris

March, XXXI, No. 3, pp. 177-264

74 Elimination of Uric Acid in Connection with the Diet. (Excrétion urique et alimentation.) M. Labbé and L. Furet.
75 *Nystagmus and Myoclonia. (Le nystagmus-myoclonie. II.) E. Lenoble and E. Aubineau.

75. **Nystagmus and Myoclonia.**—Lenoble and Aubineau give the details of thirty-eight additional cases of the peculiar myoclonia to which they called attention in 1905 as an affection comparatively common in western France and frequently of a familial type. The constancy and the fixity of the nystagmus render it the most striking of the group of symptoms. In the majority of cases the patients lead an active life with no other evidence of physical or mental degeneracy. The affection is congenital; in the few cases in which it was not noticed until after an intercurrent febrile affection, it had probably existed in a latent form. It belongs in the scale of myoclonias ranging from isolated nystagmus, through the nystagmus-myoclonia to Friedreich's paramyoclonus, Morvan's fibrillary chorea and Gilles de la Tourette's maladie des tics. All are manifestations of a special and obscure morbid condition resulting from a biologic degeneracy.

Archiv für Kinderheilkunde, Stuttgart

LV, Nos. 3-4, pp. 161-320. Last indexed February 18, p. 545

76 *Acidity of Urine in Infants. O. Lade.
77 Primary Suppurative Parotitis in Infants. A. Bretschneider.

78 Normal Bactericidal Properties of Intestinal Juice. (Zur Frage von der Verminderung der bactericiden Kraft des Dünndarms unter Einwirkung einiger innerer und äusserer Agentien.) P. S. Medowikow.
79 *Test Breakfast for Study of Stomach Functioning in Children. (Untersuchung der Magenfunctionen der Kinder mittels Probefrühstuck.) F. Seiler.
80 Premature Dentition. (Frühzeitige Zahnung.) H. Rosenhaupt.
81 *Case of Winckel's Disease. F. Brandenberg.

76. Acidity of the Urine in Infants.—Lade discusses what is meant by "acidity" of the urine, the preferable technics for estimating it, the sources for the acidity and its causes, and the variations in acidity under diverse influences. He further reviews extensive clinical experiences and tests of various forms of infant feeding in respect to their influence on the acidity of the urine.

79. Test Breakfast in Estimation of Stomach Functioning in Children.—Seiler has applied Sahli's flour soup method (*Mehlsuppemethode*) to a number of children and has found it as instructive as in adults. The children like it, and he reports the findings in a number of healthy children and in others with various diseases, from a few months to 12 years and older. The details are given for forty-one children examined, including three with gastritis, five with secretory and five with motor anomalies. The findings are like those in corresponding conditions in adults, and exact differentiation is equally important for both children and adults, he declares, to permit proper treatment.

81. Winckel's Disease.—Brandenberg has been able to find in the literature about fifty cases of this disease. It is characterized by cyanosis, bloody urine, hemorrhage and icterus. Most of the cases appeared in epidemic form in Germany or Russia in new-born infants, only a few of whom survived. He reports a case personally observed, with necropsy. An infectious factor seems evident. Baginsky asserts that simple jaundice, acute fatty degeneration or Buhl's disease, and Winckel's disease are probably only varying degrees of the same process. The jaundice is evidently the result of the hemolysis.

Berliner klinische Wochenschrift

March 20, XLVIII, No. 12, pp. 509-556

82 Salvarsan in Syphilis. (Ueber die bisherigen Erfolge der Syphilisbehandlung mit Salvarsan und die Aussicht auf Dauerheilung.) M. v. Zeissl.
83 *Salvarsan in Inherited Syphilis in Infants. (Salvarsanbehandlung bei Säuglingen.) A. Döblin.
84 *Resection of the Stomach. (Zur Magenresection.) Pochhammer.
85 *Acute Gastric Atony. (Zur Lehre von der akuten Magenatonie.) A. Schlesinger.
86 *Two Cases of Acromegaly from Fright. (Akromegalie infolge von Schreck.) P. K. Pel.
87 History of Theories in Regard to Urinary Calculi. (Historiches zur Kenntnis der Entstehung von Harnsteinen.) E. Schepelmann.
88 Temperature Crises in Tabes Dorsalis. W. Stange and S. Brustein.

83. Dangers of Salvarsan for Syphilitic Infants.—Döblin gave salvarsan to six infants and reports that no benefit in the general condition of the child was observed in any instance, the children did not lose their pallor and did not increase in weight thereafter; one strong child died from salvarsan poisoning, although the dose was only 0.03 gm. In another case the infant gained 300 gm. in five days, which he regards as a sign of toxic action of the drug, like the herpes zoster sometimes observed in adults. Four of the infants died, including two in good condition before the injection; this was made subcutaneous or intramuscular in each case and there was little local reaction at the spot. The necropsy findings suggested, he reports, acute arsenic poisoning: acute paralysis of the central nervous system, coma, severe injury of the intestines with diarrhea, drop of the blood-pressure and total paralysis of the contractile elements of the mesenteric capillaries, the so-called splanchnic paralysis. The edema in the mesenteric and subcutaneous fat tissue was evidently the result of arsenic paralysis of the capillaries. The experiences related indicate, he thinks, that 0.03 gm. may be regarded as the fatal dose for infants under the age of 3 months. Even this amount does not ward off recurrence, and as improvement in the manifestations of the syphilis may be observed, as in one of his cases, even with so small an amount as 0.025 gm., it seems reasonable to accept for infants under 3 months from 0.01 to 0.02 gm. as the tolerated dosage, that is 0.005 per kilogram of body weight.

84. Operative Treatment of Stomach Disease.—Pochhammer comments on the constantly improving end-results of surgical treatment of non-malignant stomach affections, especially ulcers and their sequels, but adds that most surgeons now regard a cancer of the stomach as already inoperable when so advanced as to be diagnosed with certainty. He insists that while the ignorance and indolence of patients are largely responsible for the delay in seeking surgical aid, a not inconsiderable share of this responsibility should be laid at the door of the so-called stomach specialists. This, he declares, will have to be proclaimed openly and loudly. These stomach specialists are the ones to whom the victims of gastric affections apply, assuming that some special help may be obtained from them after the family physician, consulted in the first place, has come to the end of his resources. In fact it may be the family physician who advises consulting the stomach specialist. And then several weeks or months of possibly precious time are wasted with all kinds of examinations, tests, lavages and dietetic courses. A tumor is not yet positively palpable; the diagnosis of "chronic gastritis" has a tranquilizing effect at first until suddenly the tragedy begins anew and with increased violence as the symptoms show that the obstruction to the emptying of the stomach has increased, but the stomach rinsings may be continued even then for a short time. By this time, the patient is losing strength rapidly; then the case is regarded as ripe for operative measures; the apparently benign stenosis requires operative intervention, and this discloses carcinoma with extensive metastases. This history is taken from life, Pochhammer declares. It demonstrates the enormous responsibility that rests on the shoulders of the stomach specialists when they attempt to differentiate benign stomach affections which have been causing symptoms for some time from malignant growths. Surgeons, he adds, even when they hold the growth in their hands, may be unable to state positively whether it is benign or malignant. The only means of differentiation is by histologic examination, and the stomach specialists are least of all in a position to do this. He protests specifically against Boas' recent assertion that in practice the time need not be regarded as wasted when a stomach specialist applies symptomatic preliminary treatment to a gastric cancer before it is positively recognized as such. Boas bases this assertion on the premise that only the slowly developing gastric cancers are amenable to operative measures; those which develop rapidly are inevitably fatal, whether an operation is attempted or not. To this Pochhammer replies that while this assumption may tranquilize the stomach specialists it might have disastrous consequences if it were accepted generally by physicians who have not yet fully lost their reverence for authority. There is no physician, he continues, who would not regard it as trifling with a human life, when consulted on account of a dubious tumor in the breast, if he should wait for a long period of observation to watch the further development of the growth instead of insisting on its prompt excision and histologic examination. Gastric affections should be managed on the same principles. Every stomach affection which is not of a transient nature and for which no satisfactory explanation can be found, should suggest the possibility of cancer. And surgeons should reiterate constantly the necessity not only for an early diagnosis but for an early operation. He reports nine cases during the last year and a half with operative treatment. One of the patients was a woman of 34 with extensive carcinoma of the stomach. She had had recurring gastric symptoms for ten years; the cancer had evidently developed in an old ulcer. She has gained 11 pounds during the four months since operation. In another case the first symptoms had been observed four months before the operation, and the tumor required resection of the stomach and of the middle third of the transverse colon. The patient is now in good condition having gained 40 pounds in weight since. The colon stumps were united by lateral anastomosis, which seems, he thinks, to hold better than other technics.

XUM

85. **Acute Atony of the Stomach.**—Schlesinger reports an instructive case of acute atony of the stomach developing in consequence of the sudden sliding down of the viscera as the much debilitated patient got up the seventh day after an operation for retrodisplacement of the uterus. The symptoms subsided under repeated lavage of the stomach, the pelvis being kept raised. The special feature of the case, however, was the feculent vomiting; he regards this as proof that there could not have been occlusion of the upper bowel and, consequently, that the acute dilatation of the stomach could not have been secondary to an arteriomesenteric occlusion which some accept as the primary phenomenon in acute postoperative dilatation of the stomach. It is the first case on record, he says, in which acute atony of the stomach was unaccompanied by occlusion of the upper bowel. The case further shows, he declares, the beneficial action of raising the pelvis to remedy conditions, instead of the ventral decubitus which some have advocated for this purpose. With the pelvis raised it is much easier to rinse out the stomach; the stomach sinks down into its normal place and the small intestine follows it, thus relieving the traction on the mesentery. In another case, the pelvis was raised high for twenty-four hours, the patient being kept thus on the operating table for twenty-four hours, the stomach being rinsed out every hour at first and then at longer intervals. He thinks that anything less than these measures would have failed to save this patient. It is not enough to raise the pelvis occasionally for a time; it must be kept raised or the traction on the nerves and mesentery returns again. He never found it necessary to turn the patient on the side. An important adjuvant measure is to supply plenty of water by the rectum or by saline infusion. Large amounts of water accumulate in the stomach and are evacuated by the lavage, and it is of supreme importance to restore fluids to the body in some other way. Application of electricity to the stomach may also prove useful. In conclusion, Schlesinger reports experiments on dogs to induce acute atony of the stomach.

86. **Acromegaly from Fright.**—A fire in the home or gas explosion was the cause of the fright in the two cases reported. One patient was a housemaid, about 21 years old; the other was a woman of 31, six months pregnant. Menstruation was arrested at once in the case of the younger woman and there was no sign of the menses for several months, then only for two or three months; since then there has been complete amenorrhea. Menstruation did not return after the childbirth in the other case. The other symptoms of the acromegaly developed more gradually but the typical picture has persisted to date, four and sixteen years respectively after the fright.

Deutsches Archiv für klinische Medizin, Leipsic

CII, Nos. 1-2, pp. 1-216. Last indexed March 18, p. 856

89 Tissue Changes Cause of Lessened Resistance to Infections in Diabetes Mellitus. (Ursache der verminderten Resistenz des Diabetikers gegen Infektionen.) E. Handmann.
90 Metabolism During Catatonic and Paralytic Stupor. Eighteen Cases. (Zur Kenntnis der Stoffwechselverlangsamung.) E. Grafe.
91 Clinical and Anatomic Study of Syphilitic Cardiovascular Disease. (Syphilitische Herz- und Gefässkrankheiten.) H. C. Jacobaeus.
92 *Apparatus for Passive "Hill-Climbing" During a Bed-Rest Cure for Heart Disease. (Ruhekuren für Herzkranke in Verbindung mit passiven Bewegungen.) T. Büdingen.
93 Isolated Agraphia in Case of Brain Tumor. E. Forster.
94 Oxygen Ions in Stomach Content. (Die Sauersstoffion-Konzentration im Mageninhalt.) J. Christiansen.
95 Experimental Research on Action of Epinephrin in Kidney Disease and in Health. (Blutdrucksteigernde Wirkung des Suprarenins bei gesunden und nierenkranken Tieren.) B. Scholz.
96 Anemia-Inducing Action of Bacterial Hemolysins. L. Fejes.
97 Metabolism of Matter and Energy in Fever. (Stoff- und Kraftwechsel im Fieber.) H. Senator and E. Grafe.
98 Heart Block from Primary Heart Tumor in Five-Year-Old Boy. (Herzblock, bedingt durch primären Herztumor.) H. Armstrong and J. G. Mönckeberg.
99 *Traumatic and Renal Diabetes. (Einige ätiologisch bemerkenswerte Diabetesformen.) W. Weiland.
100 Determination of Viscosity of the Blood. (Zur Technik der Viskositätsbestimmung.) G. Kagan.
101 Ring-Bodies in the Blood in Anemia. K. E. Russow.

92. **Passive Exercise in Heart Disease.**—Büdingen has been protesting for years against the application to actual heart disease of Oertel's method of exercise treatment for the obese with weak heart muscle. On the contrary, he insists, patients with heart disease should be guarded against the slightest extra demands on their hearts and should be kept in bed during periods of extra weakness on the part of the heart. At the same time it is important for them to exercise without the effort of voluntary movements. Exercising the legs is the best means in such cases to divert the blood from the heart, to improve the peripheral circulation and to stimulate the vital processes generally. He has been trying to contrive an apparatus which would exercise the patient without the slightest active participation on his part, and the apparatus as perfected after nearly two years' experiments is here described and illustrated. The patient lies on the back, the legs fitting into shallow troughs which are lifted in turn by the automatically working apparatus stationed at the foot of the bed and run by an electric motor, the patient being able to start and stop it at will by a touch to the chain in his hand. The movements imparted to the limbs are those of walking or hill climbing, and the patient can thus obtain the benefits of the active exercise without the least strain on his heart. Büdingen has the exercise applied two or three times a day for thirty or twenty minutes each time. The benefit in severe heart disease is surprising, even with ruptured compensation; the venous engorgement and edema subside, the liver returns to normal size and the signs of cardiac insufficiency rapidly retrogress. The apparatus has also rendered good service, he states, in cases of intermittent limping, of gout of the ankle, threatening diabetic gangrene and tabetic ataxia of the legs. Among the cases reported in which the passive exercises proved of special benefit is that of a physician of 47 who, before the age of 22, had had four attacks of febrile articular rheumatism which had left aortic insufficiency. Recurring endocarditis with fever nearly every day was kept under comparative control for a year by the bed rest and passive exercise, alcohol rubs and small doses of heart tonics. In other cases cited, the bed rest cure finally restored patients with mitral insufficiency to comparative health so that they could climb hills. Bed rest alone is not beneficial in cases of cardiac insufficiency with high blood-pressure, with or without kidney disease, but when the bed rest is supplemented by the vigorous passive exercise, conditions are improved as if by magic. It breaks up the vicious circle formed when the patient actively exercises while it gives the advantages of active exercise. In a particularly severe case described, the oliguria and dropsy had continued to increase notwithstanding that the patient had lain in bed for two months. Then the exercising apparatus was brought into use and in two more months the dropsy had drained away in the diuresis that followed the exercising and the general health was remarkably improved.

99. **Traumatic and Renal Diabetes.**—Weiland reports a case in which a wooden pail fell from a height of over 25 feet on the head of a man digging a well. He was unconscious for half an hour but the wound healed without further disturbances. A week after the accident, however, great lassitude, intolerable thirst, polyuria and pruritus developed and after another week the urine contained 4.7 per cent. of sugar. A year later the symptoms still persisted, with 1.7 per cent. sugar in the urine. The patient had been previously healthy, and came of a healthy family with no tendency to obesity or alcoholism. The progressive course of the diabetes in this case confirms the general assumption in regard to the comparatively rapid course of true traumatic diabetes. Weiland is inclined to regard the nervous shock of the accident as more of a causal factor than any pathologic changes at the site of the injury. He describes further three additional cases of renal diabetes, that is, persisting elimination of sugar in the urine without any apparent disturbance in the carbohydrate metabolism. The proportion of sugar in the blood was within normal range. The glycosuria was a casual discovery and the kidneys and other organs were apparently functioning normally. The special feature of the three cases was the lack of hyperglycemia and the absence of the usual subjective disturbances of diabetes, and of polyuria. The patients' weight persisted about the same throughout. It is possible that the diabetes in these cases may have existed long before its clinical discovery. He believes that some disturbance in the kidney parenchyma is probably responsible for this renal form of

diabetes, the injury of the parenchyma escaping detection by our present methods of examination. Theoretically this renal diabetes may be classed with alkaptonuria and cystinuria, an anomaly not threatening the vital functions. He adds in conclusion that it is better to refrain from excess in the articles of food liable to enhance the tendency to the anomaly. At the same time such patients should not be depressed with too stringent dietetic restrictions.

Deutsche medizinische Wochenschrift, Berlin

March 23, XXXVII, No. 12, pp. 529-576

102 *Leukemia. (Behandlung der Leukämie.) M. Sternberg.
103 *Tumors in the Lungs and Pleura. (Zur Klinik der Lungen- und Pleurageschwülste.) A. Fraenkel.
104 *Treatment of Pancreatic Cysts. (Zur Behandlung der Pankreaszysten und -pseudozysten.) W. Körte.
105 Roentgen-Ray Primary Erythema. A. Brauer.
106 *Cystoscopy in Diagnosis of Pregnancy Pyelitis. (Bedeutung der Zystoskopie für die Diagnose und Behandlung der Schwangerschaftspyelitis.) A. Calmann.
107 *Findings in Fundus of the Eye in Inherited Syphilis. (Augenhintergrundsbefunde bei hereditärer Syphilis.) A. Japha.
108 Hemorrhagic Septic Infection of New-Born Infants. (Fall von Buhlscher Krankheit.) G. Röthler.
109 Technic for Intravenous Injection of Salvarsan. (In welcher Konzentration sollen wir die ClNa-Lösung zu unseren intravenösen Salvarsaninjektionen benutzen?) T. v. Marschalko.
110 Idem. (Zur Technik der intravenösen Injektion des Salvarsans.) D. A. Stapler.
111 *Acute Thyroiditis Following Potassium Iodid Treatment. (Thyreoiditis acuta nach Gebrauch von Jodkali.) J. Sellei.

102. **Leukemia.**—Sternberg reviews the typical syndrome and discusses the treatment, emphasizing the importance of Roentgen-ray treatment and keeping the patient under constant supervision, so as to institute another course at the first signs of exacerbations. By this means it is possible to keep the patient in good condition with fair earning capacity for years. One of his patients was thus able to work at his trade of cabinet-maker for two years after comparative retrogression of the myeloid leukemia, dying then of ulcerative endocarditis. In another case a woman of 35 had been treated for weeks without benefit for symptoms suggesting influenza. A second physician was called and he found the spleen enlarged and diagnosed typhoid fever. The patient was anemic, feeble, with irregular fever, bronchitis, enlarged spleen and 450,000 small lymphocytes per c.mm. Roentgen-ray treatment was then applied and by the end of six weeks, the lymphocytes had dropped to 31,000 and the patient was able to take long walks, and this improvement has persisted to date, although the blood is not normal, the hemoglobin declining from 35 to 20 per cent. He is inclined to explain the action of the radiotherapy as partly direct, on the blood-producing organs, and partly indirect, by mediation of substances generated which have an inhibiting action on the production of leukocytes in parts of the blood-producing apparatus not exposed directly to the rays. In some conditions the rays have an opposite effect, that is, they may induce an affection of the blood and lymph-producing organs. Sternberg knows of four physicians who had worked considerably with Roentgen-rays who have died from leukemia or pseudoleukemia and lymphosarcoma. This coincidence must be more than merely casual; they all date from the days when Roentgenologists were less careful about protecting themselves than at present. Sternberg commends Roentgen exposures as the first measure in leukemia; for this institutional treatment is generally necessary, and hydrotherapy can be applied at the same time. During a pause in the radiotherapy or possibly with it, in case the affection is more of the neoplasm order, a course of arsenic may be useful, but he warns against arsenic poisoning, especially herpes, eczema and paralysis as manifestations of arsenic intoxication. The herpes may run into gangrene if the Roentgen exposures are kept up. In one case an eczema of the lips resisted all treatment until the arsenic was suspended, when it subsided at once. In a case of sarcomatosis with leukemic blood findings, the tumors subsided temporarily under large doses of arsenic but the arm became paralyzed and permanent paresis and tremor followed. It is his impression that arsenic is more liable to cause symptoms of intoxication when the lymph and blood-producing apparatus is diseased. He states that organotherapy and salvarsan have no action in leukemia. The main point in treatment is to commence it at the proper time and keep watch of the blood findings in case the leukocyte count is increasing, and suspend the exposures when the blood shows signs of a crisis or when myeloblasts appear in large numbers.

103. **Tumors in the Lungs and Pleura.**—Fraenkel reports three cases of pleural endothelioma leading to diffuse indurations. They all developed rapidly with extensive effusion, intensely hemorrhagic and accumulating again in a few days, and with intense pains, evidently due to traction from and the compressing action of the fibrous bands. In a fourth case the trouble was diagnosed during life as a carcinomatous pleurisy, the diagnosis being confirmed by necropsy. The patients were men between 37 and 48 and a woman of 66. Death followed in from one to two months after the first symptoms of trouble in the pleura.

104. **Treatment of Pancreatic Cysts.**—Körte reports six cases of inflammatory pseudocysts in which Gussenbauer's method of suturing to the skin and draining was successfully applied. In all of these cases the pancreatitis had several times induced symptoms suggesting gall-stone colic. The inflammatory or hemorrhagic effusion is not absorbed and benefit can be anticipated only from its prompt removal as soon as diagnosed. The trouble is in reality an encapsulated effusion or pseudocyst, and probably the cases of recovery reported from this technic have been in cases of this class. When the trouble is a true multilobular cystadenoma, this technic is not sufficient. It was applied twice in a case reported in detail, with only temporary benefit. Then the cystadenoma was radically removed and prompt recovery followed.

106. **Cystoscopy in Diagnosis of Pregnancy Pyelitis.**—Calmann reports four cases which confirm the importance of cystoscopy not only for early diagnosis of the pyelitis but in excluding appendicitis and cholecystitis, in locating the seat of the trouble and in permitting local treatment. In the first case, the patient had been treated for weeks for pregnancy disturbances and cystitis without avail; then cystoscopy disclosed slight hyperemia at the mouth of the right ureter and its catheterization evacuated pus and permitted local irrigation with 200 c.c. of a 1 to 2,000 solution of silver nitrate. All symptoms subsided at once. The same benefit was derived in the second case; the pyelitis developed here during the third month. In another case a chronic nephritis was left after the pyelitis which was in an advanced stage when local treatment was instituted. The macerated fetus was expelled three days after the local treatment; if this had been applied earlier, the death of the fetus might have been prevented as well as the development of the nephritis. It was a question in this case whether to interrupt the pregnancy or treat the kidney pelvis and he decided for the latter as briefer and milder. In two of the four cases the pyelitis was bilateral; in all the turn for the better that followed the disinfection of the pelvis was unmistakable, but a complete cure was not realized at once in any instance, the pus and bacteria persisting to a slight degree until a few weeks after delivery. It is possible that repetition of the procedure might cure completely. He does not advise this direct sterilization of the kidney pelvis as a routine procedure, but only when other measures have failed. It did not prove necessary in five other recent cases of pregnancy pyelitis in his experience.

107. **Eye Findings in Congenital Syphilis.**—Japha has made a practice of having the fundus of the eye examined in every infant showing a tendency to nervous disturbances, at the policlinic in his charge. Among 1,350 ophthalmic patients, in 1909, there were twenty cases of abnormal retina in infants with inherited syphilis, thus in 1.5 per cent. He found further that fully 66 per cent. of infants with inherited syphilis present anomalies in the fundus. Sometimes, with the Wassermann reaction, they are the only signs of the disease and they explain in many cases the convulsions, restlessness and constant crying of the infants. The findings in the fundus are generally bilateral but not always equally severe in both eyes. By this systematic examination, the optic neuritis is detected in its early stage, before it has reached the advanced phase. A peculiar rolling of the eyes, blinking or squint sometimes attracted attention to the eyes, or photophobia and twisting

the head to one side and trembling of the eyelids. The prognosis of the eye disturbance is favorable if treatment is promptly instituted; rapid improvement followed in nearly every instance after a course of mercurial treatment. For this he preferred internal administration of from 0.005 to 0.01 gm. of mercury protoiodid twice a day in two or three fifty-day courses. Recurrence was never observed although a number of the children were kept under supervision for years. Hirschberg, however, has observed recurrence at the ages of 13, 14 and 22. He only found one case of retinal changes from inherited syphilis in 1,000 ophthalmic patients. Among the typical cases reported by Japha is that of an infant whose only trouble was that it cried a great deal, especially at night. At the age of 3 months the eyes were examined and an areolar chorioiditis was discovered. As soon as antisyphilitic treatment was started the child ceased crying.

111. **Thyroiditis Following Iodid Treatment.**—Sellei reported in 1902 a case in which inflammation and swelling developed in a previously sound thyroid after the patients had taken 2 spoonfuls of a 5 per cent. solution of potassium iodid. The acute thyroiditis was accompanied by high fever. He here reports a similar case, the acute thyroiditis developing after the first spoonful and becoming more intense after 2 more spoonfuls. The iodid had been given in this case after a course of mercury. The thyroiditis subsided completely in a week. It was evidently a manifestation of iodism, the picture including palpitations and a pulse running up to 120. He is inclined to explain the symptoms as a manifestation of anaphylaxis.

Jahrbuch für Kinderheilkunde, Berlin

March, LXXIII, No. 3, pp. 259-390

112 *Experimental Research on Action of Products of Decomposing Urine. (Versuche über experimentellen Spasmus nutans und über die Einwirkung von Harnzersetzungsprodukten auf junge Hunde.) R. W. Raudnitz.
113 Regulation of Heat in Infants. (Die Thermoregulation des gesunden und ernährungsgestörten Säuglings.) P. Heim and M. K. John.
114 Blood-Pressure in Children. (Blutdruck im Kindersalter.) V. Salle.
115 Anaerobic Intestinal Bacteria, Especially Those of Butyric Acid Fermentation. F. Passini.
116 Differential Bactericidal Properties of Leukocytes in Respect to Streptococci. (Ueber Unterschiede zwischen septischen und Scharlach-Streptokokken auf Grund bakterizider Reagensglasversuche mit Leukozyten.) F. Schleissner and W. Spät.
117 *Anatomic Findings in Stomach of Infant Five Months After Cure of Stenosis of the Pylorus. J. Simon.
118 Two Cases of Congenital External Hydrocephalus. Z. v. Bokay.

112. **Experimental Research on Injurious Influence of Products of Decomposition of Urine.**—Raudnitz has been studying on animals brought up in the dark the development of a clonic spasm of the sternomastoid muscles when they are exposed to the light, the result being a sort of nodding spasm associated with nystagmus. He has also studied the influence of the products of decomposing urine, his attention being attracted to this line of research by a peculiar intense fragility of the bones observed in two children of a family that lived in a room adjoining the general urinal for a large factory, one wall of the room being constantly damp with decomposing urine. It proved impossible to induce in puppies any tendency to osteomalacia or rachitis even when kept for eight months in the fumes of their own decomposing urine.

117. **State of Infant's Stomach Six Months After Cure of Stenosis.**—The disturbances from stenosis of the pylorus in the case described had never been very severe, and they subsided completely under flaxseed poultices renewed every two hours. There was an inherited neuropathic taint, but after subsidence of the symptoms of stenosis the child thrived normally for six months but then died on the second day of an attack of pneumonia. The stomach was compared with the stomach of a normal child; the findings were extreme hypertrophy by excessive development of the musculature of the pylorus and stomach walls. The assumption of a primary hypertrophy of the stomach walls explains the anatomic, clinical and therapeutic data in these cases of stenosis of the pylorus in infants. The hypertrophy induces secondarily reflex spasmodic contracture of the musculature and thus entails the clinical picture.

Medizinische Klinik, Berlin

March 26, VII, No. 13, pp. 479-518 and Supplement

119 Staphylococcus-Extract Salve and Varnish: An Attempt to Induce Local Immunity. (Ueber einen Versuch, die lokale Immunität für die Praxis brauchbar zu machen.) A. v. Wassermann.
120 *Early Diagnosis of Pulmonary Tuberculosis. (Welche Bedeutung haben die neueren Untersuchungsmethoden zur Frühdiagnose der Lungentuberkulose für den praktischen Arzt?) E. Schwalm.
121 Salvarsan in Malaria. (Beeinflussung der Chininfestigkeit durch Salvarsan bei Malaria.) G. B. Bilfinger.
122 Is Acute Appendicitis Due to Inflammation or Obstruction? (Beruht der akute schwere Appendizitisanfall auf Entzündung oder mehr ileusartigen Vorgängen?) Sorge.
123 *Persistent Hiccup. (Fall von heftigem Singultus.) F. Kanngiesser.
124 Dietetic and Physical Measures in Treatment of Kidney Disease. (Nierenkrankheiten.) J. Hurter.
125 *Irritation of Optic Nerve by Salvarsan. (Zur Kasuistik der Salvarsantherapie.) A. Jansen.

120. **Early Diagnosis of Tuberculosis.**—Schwalm discusses whether the newer methods of diagnosis are of much assistance to the general practitioner, his conclusion being that the clinical examination of the patient is still as always the main reliance, and that the tuberculin test should not be applied except when there is some indication of incipient pulmonary tuberculosis and it is impossible to determine the facts in any other way. If the tuberculin test is applied, it should be by subcutaneous injection for adults and by the cutaneous method for children. The subcutaneous test should not be applied, he says, outside of an institution as close supervision of the patient is indispensable for its proper estimation; if the temperature is taken by the laity the findings are unreliable. He warns further to be on the watch for the pseudoreaction liable to occur in nervous patients; the only means to exclude it is by a control injection of water alone.

123. **Persisting Hiccup.**—In the case reported by Kanngiesser, the distressing hiccup came on during an attack of influenza in an elderly man. No benefit was derived from a subcutaneous injection of 0.001 gm. of atropin sulphate, which has been recommended lately for this purpose; in half an hour the patient's mouth became parched and he felt a burning in the nose but the hiccup was unmodified. After waiting for an hour and a quarter after the injection, the patient was then given in separate glasses a solution of 5 gm. citric acid and of 5 gm. sodium bicarbonate, hoping by the distention of the stomach from the effervescing fluids to act on the diaphragm from below. The procedure was a complete success, the hiccup ceasing at once. The patient was awakened in the night, however, by recurrence of the hiccup and repetition of this measure then failed to relieve, as did also the next day rhythmic traction of the tongue and holding the breath. He was then given a little sodium bicarbonate in water, and the hiccup ceased at once for a few hours, but returned then and persisted until the patient took some warm oatmeal gruel. This arrested the hiccup and had the same effect the next day when the hiccup returned, after which there was no further trouble. Kanngiesser appeals to other physicians to learn if they know of any better measures to arrest persisting hiccup.

125. **Irritation of Optic Nerve Under Salvarsan.**—Jansen states that several days after an intravenous injection of 0.4 gm. of salvarsan, the patient happened casually to mention that, commencing four hours after the injection, everything seemed to waver before his eyes for three hours. Jansen believes that if it were enquired for, this sign of irritation of the optic nerve (*heftiges Flimmern*) might be found frequent after injection of this drug.

Münchener medizinische Wochenschrift

March 21, LVIII, No. 12, pp. 609-664

126 *Cholelithiasis. (Allgemeine Grundsätze für die Diagnostik, Indikationsstellung und Therapie des Gallensteinleidens.) H. Kehr.
127 *Heart and Kidney Disturbances with Chronic Constipation. (Herzmuskelinsuffizienz bei chronischer Koprostase nebst Bemerkungen über die bei letzterer auftretende Albuminurie und Zylindrurie.) W. Ebstein.
128 *Diagnostic Inflation of the Stomach. (Zur Technik der Magenaufblähung.) F. Bardachzi.
129 Traumatic Myopathy. (Muskeldystrophie und Myotonie nach Unfall.) W. Brasch.
130 *Eosinophil Diarrhea in Infants. (Zur Kenntnis eosinophiler Darmkrisen im Säuglingsalter.) L. Langstein.

131 Copper Isolated from Urine and Perspiration of a Worker on Brass. (Isolierung von Kupfer aus Harn und Schweiss eines Messingarbeiters.) E. H. Goodman.
132 Splenic Anemia in Inherited Syphilis and Its Cure Under Salvarsan. W. Schmidt.
133 Technic for Salvarsan Treatment. A. Hauptmann.
134 Typical Coasting Fracture. (Eine typische Rodelverletzung.) Bertram.
135 Improved Technic for Color Ring Tests of Fluids. Schnitter.
136 Paratyphoid Infection. F. Rolly. Commenced in No. 11.

126. **Gall-Stones.**—Kehr comments on the fact that no drugs or medical measures are able to act on the gall-stones themselves; all other measures but direct removal act merely on the conditions resulting from the presence of the stones, especially the inflammation. All that is possible is to keep the stones latent and answer the patient's four questions: "Have I gall-stones?" "Can you feel them?" "Must I have an operation?" and "Is the operation dangerous?" Only in exceptional cases, he continues, is it possible to state positively the presence of gall-stones. Even with his 1,668 gall-stone operations he still makes mistakes in diagnosis of cancer of the gall-bladder, especially when it is associated with empyema. With chronic empyema the temperature may be persistently within normal range in 50 per cent. of the cases. The history is of peculiar importance for the diagnosis of chronic empyema of the gall-bladder and chronic obstruction of the common bile duct, and he makes a point of writing it out and reading it over carefully two or three times to weigh it in all its bearings. A diagnosis based on the history is liable to be more correct than one based on the actual findings at the moment. In the written history we can follow the gall-bladder affection from simple serous cholecystitis to the obstruction of the cystic duct and the accumulation of pus in the gall-bladder, the passage of the stone into the common bile duct or its final perforation into the bowel, and we can trace the various stages of the affection by the presence or lack of jaundice and fever, swelling of the liver and pains. The localization of the pain is frequently misleading. In one case the only tender point was under the left costal arch, suggesting ulcer in the lesser curvature of the stomach, but the trouble was the result of numerous stones in the common bile duct. A high placed appendix may simulate cholecystitis. He states that he has been able to palpate the stones only in two or three out of his total 4,000 patients. Operative treatment is required more for the infectious process and to forestall its spread to other organs than to remove the stones themselves. This infection threatens the liver and pancreas and must be combated by removal of the focus in time, while it is still circumscribed. This is the main aim of treatment, and no time should be wasted with drugs and waters to which the power to dissolve or expel the stones is ascribed. Such measures should be left to quacks, and internists should cooperate with surgeons to check and cure the acute and chronic inflammation. This is best realized by moist heat, purgatives, restriction of the diet and repose, the cholelithiasis having a spontaneous tendency to return to a latent condition so that in 80 per cent. of all cases the colics finally subside spontaneously. The quack claims this 80 per cent. as his "cures," while the physician knows that Nature has wrought the cure and that it often is only a deceptive lull. The only radical cure is by removal of the infectious focus. Among Kehr's other reflections on gall-stone disease is the statement that when there is reason to suspect cancer in the gall-bladder, it is already too late for a radical cure; the patient is doomed. Only when in an operation for gall-stones, traces of incipient cancer are casually encountered, is the patient completely cured of the malignant disease. The loss of the gall-bladder causes no appreciable disturbances, and a new formation of gall-stones in the biliary ducts after cholecystectomy is so rare as to be negligible. Done in time, he reiterates, a gall-stone operation is practically free from danger.

127. **Chronic Constipation in Relation to Heart and Kidney Symptoms.**—Ebstein discusses the albuminuria and tube-casts liable to be found in the urine with chronic constipation or persisting coprostasis, and states that before attempting to estimate the prognosis of the kidney affection in such cases the intestinal functions should be regulated. The pathologic urine may be the result of toxic action from poisons generated in the intestines. The same statement applies to heart disturbances. When the heart is found enlarged or displaced, before assuming the presence of organic disease, conditions should be investigated to exclude displacement of the heart from the pushing up of the diaphragm from below. By removing the causes of this pushing up of the diaphragm—among which chronic constipation takes the first place—the symptoms on the part of the heart, even including those of cardiac insufficiency, may retrogress entirely. He recently reported subsidence of symptoms of exophthalmic goiter in four cases under treatment of chronic constipation by means of large enemas of oil. His report was summarized in THE JOURNAL, February 11, page 467.

128. **Diagnostic Inflation of the Stomach.**—Bardachzi reports from the medical clinic at Prague, in charge of Pribram, that inflation of the stomach with an effervescing mixture or with air alone has been systematically practiced there for years. In one case, however, the ingestion of the effervescing mixture was followed by severe hemorrhage from the stomach, and in another case by severe symptoms on the part of the heart from the pushing up of the diaphragm. Both patients were women in the fifties, and the alarming symptoms soon subsided. Behrend was less fortunate, Bardachzi remarks, as he lost three patients from this cause, the sudden distention inducing perforation of a gastric ulcer in two and of a carcinoma at the cardia in the third patient. For this reason Pribram has abandoned this method except in special cases, and prefers to distend the stomach with air alone. He interposes a glass jar with two mouths between the stomach tube and the tube with the double rubber bulb. If the patient retches during the inflation the vomitus collects in the interposed jar; this method of distention seems to be much less dangerous than with the effervescing mixture, while it permits graduated dosage. In the two mishaps Bardachzi reports, less than a teaspoonful of sodium bicarbonate and half a teaspoonful of tartaric acid were used for the test, each being dissolved in half a glass of water.

130. **Eosinophil Diarrhea in Infants.**—Langstein called attention in 1908 to the passage of mucus and pus by the bowels, occurring suddenly, the mass containing large amounts of eosinophil cells. In a case described here he noticed this sudden eosinophil intestinal crisis, as he calls it, as the first sign of the exudative diathesis; it was speedily followed by facial eczema. The mucopurulent stool in the infant, only a month old, would generally be considered a sign of severe intestinal derangement, but he regarded it as merely the expression of the diathesis and not of an alimentary disturbance in the ordinary sense. Consequently, he made no change in the diet except restricting the amount a little, and the further development of the child confirmed the correctness of these views. The intestinal crisis in these cases may be regarded as similar to what Strümpell calls intestinal asthma in infants; it is not accompanied by a rise in temperature or drop in weight—symptoms scarcely ever absent when it is a question of alimentary or infectious injury.

Wiener klinische Wochenschrift, Vienna

March 23, XXIV, No. 12, pp. 411-442

137 Cholesterinemia in Physiologic Pregnancy. (Biologische Studien über die weibliche Keimdrüse.) J. Neumann, E. Hermann and S. Fränkel.
138 Thymus Not Involved in Blood Production. J. Löw.
139 Technic for Determining Presence of Tubercle Bacilli in the Urine. (Versuche einer Vereinfachung des Tuberkelbazillennachweises im Harn.) R. Bachrach and F. Necker.
140 *Epidemic Endocarditis? (Kann die Endocarditis acuta epidemisch auftreten, und herrscht gegenwärtig eine solche Epidemie in Wien?) M. Herz.

140. **Epidemic Endocarditis.**—Herz states that he has seen so many cases of acute endocarditis at Vienna in the last few months that he asks whether it is possible for this disease to occur in epidemic form. The patients were all between the ages of 6 and 18 and the clinical course was alike in all, beginning with moderate fever without angina or joint symptoms; only later there were pains in one or both ankles in a few cases. Multiple articular rheumatism did not develop in any case, but in the second week there was tachycardia, accompanied later by palpitations, pains in the apex region,

rapid breathing and cyanosis. The myocardium behaved well, seldom showing much dilatation. Another symptom was a tormenting dry cough, especially at night, sometimes brought on by eating and often followed by vomiting.

Zeitschrift für Urologie, Berlin

March, V, No. 3, pp. 161-240

141 The Prostatic Secretion. (Das Prostatasekret.) C. Posner.
142 Idem. (Zur Kenntnis der Natur der Prostatakörner.) P. Fürbringer.
143 Bacteria of Normal Male Urethra. (Beitrag zur Gonokokkendiagnostik.) A. v. Wahl.
144 Advantages of "Stiff Silk Catheter" with Hypertrophied Prostate. (Ueber "steife Seidenkatheter," zum Gebrauch bei Prostatavergrösserung.) O. Heyse.
145 Chancroid in the Fossa Navicularis. (Ulcus molle fossae navicularis urethrae.) Tschumakow.

Zentralblatt für Chirurgie, Leipsic

March 25, XXXVIII, No. 12, pp. 417-456

146 *Exposure of Nasopharynx by Slitting the Lower Jaw and Separating the Soft from the Hard Palate. (Freilegung des Nasenrachenraumes durch mediane Spaltung des Unterkiefers und Ablösung des weichen Gaumens vom harten.) A. Krogius.
147 Prevention and Treatment of Mediastinal Emphysema. M. Tiegel.

146. **Exposure of Nasopharynx.**—Krogius worked out on the cadaver several years ago the technic he describes with an illustration, and has been commending it for the clinic but only recently had opportunity to apply it himself on two patients. They bore the operation well and the further course was gratifying, while the operation itself was accompanied with remarkably slight loss of blood. It was done for removal of a fibroma in the nasopharynx in both instances. He applied part of the technic in a previous case two years ago but found an inoperable tumor in the pituitary body and the patient died the next day with pulmonary edema. The main features of the technic are the median incision of the lower jaw, enabling the two halves to be turned back on each side, the tongue being drawn down over the cleft. The soft palate is then separated from the hard palate by an incision curving across nearly to the teeth on each side. This permits the soft palate to be drawn down on the tongue quite out of the way, giving ample access to the nasopharynx through the gap thus left.

Zentralblatt für Gynäkologie, Leipsic

March 25, XXXVIII, No. 12, pp. 417-456

148 *Anteflexion of the Uterus as Cause of Development of Myomas. (Zur Aetiologie und Prophylaxe der Uterusmyome.) D. v. Ott.
149 High and Low Epidural Anesthesia. (Hohe und tiefe extradurale Anästhesien.) H. Schlimpert.

148. **Anteflexion of Uterus in Origin of Myomas.**—Ott has had opportunity to watch over the later fate of large numbers of women with symptoms indicating anteflexion of the uterus. This experience has demonstrated beyond question, he states, that the venous engorgement and other interference with the circulation in an anteflexed uterus invite the development of myomas which are almost certain to follow. He declares, therefore, that anteflexion should no longer be regarded as a comparatively harmless anomaly which it is unnecessary to correct unless it is causing severe symptoms. It should be corrected without delay by medical or other measures, above all when changes in the parenchyma are already installed. Measures to regulate the circulation in the region, especially gynecologic massage, and measures to render conception possible, such as excision of the cervix, are the most important. In over a third of his patients treated with excision of the portio vaginalis on account of anteflexion, the women, long sterile, bore one or more children. The fibrous bands fastening the cervix in front have to be separated, and it is important, he says, to take the sutures at right angles to the line of the incision so that the row of sutures is sagittal to the cervix. A pregnancy transforms conditions and is the chief aim sought in treatment of anteflexion, and this transformation abolishes the conditions which unmolested lead to myomatous degeneration later. Ott thinks that it is absurd to seek for an explanation for the development of tumors which will apply to all; it is also absurd to reject a working hypothesis because it does not explain all kinds of conditions.

Riforma Medica, Naples

March 20, XXVII, No. 12, pp. 309-336

150 Psychic Disturbances of Gynecologic Origin. (Turbe psichiche d'origine ginecologica.) L. M. Bossi and L. Strofeni
151 Improved Technic for Making Microscopic Sections. (Un mezzo semplicissimo per attaccare automaticamente le sezione microscopiche contemporaneamente al taglio.) G. Pollaci.

Nordiskt Medicinskt Arkiv, Stockholm

XLIII, Internal Medicine No. 3. Last indexed January 7, p. 84

152 Leukocytosis During Digestion and the Influence of Sleep and the Waking State on the Leukocyte Content of the Blood. (Bidrag till frågan om förekomsten af en digestionsleukocytos och till kännedomen om sömnens och det vakna tillståndets inverkan på blodets leukocythalt.) W. Wernstedt.
153 Case of So-Called Pseudoleukemic Anemia in Children. K. O. af Klercker.

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

THE DESTRUCTION OF FLEAS BY EXPOSURE TO THE SUN. By Captain J. Cunningham, M.D., I.M.S., Offg. Assistant to the Director, Bombay Bacteriologic Laboratory. Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. Issued under the Authority of the Government of India by the Sanitary Commissioner with the Government of India. (New Series.) No. 40. Paper. Price, 8 annas. Pp. 27. Calcutta: Supt. Government Printing, India, 1911.

THE EXPERIMENTAL CHEMOTHERAPY OF SPIRILLOSES (SYPHILIS, RELAPSING FEVER, SPIRILLOSIS OF FOWLS, FRAMBESIA). By Paul Ehrlich and S. Hata. With Contributions by H. J. Nichols, New York; J. Iversen, St. Petersburg; Bitter, Cairo; and Dreyer, Cairo. Translated by A. Newbold, and Revised by Robert W. Felkin, M.D., F.R.S.E., Late Lecturer on Tropical Diseases, Edinburgh Medical School. Cloth. Price, $4. Pp. 181, with illustrations. New York: Rebman Co.

THE EFFECTS OF A NUMBER OF DERIVATIVES OF CHOLINE AND ANALOGOUS COMPOUNDS ON THE BLOOD-PRESSURE. By Reid Hunt and R. de M. Taveau. Hyg. Lab. Bull. 73, U. S. P. H. and M.-H. S., Treasury Department, March, 1911. Paper. Pp. 135. Washington: Government Printing Office, 1911

REPORTS OF THE MEETINGS OF THE NEW ENGLAND BRANCH OF THE AMERICAN UROLOGICAL ASSOCIATION FOR THE WINTER, 1909-1910. Paper. Pp. 37, with illustrations. Dr. Francis S. Watson, President, Boston. Dr. Richard F. O'Neil, Secretary, Boston. Boston: W. M. Leonard, 1911.

CRIMINAL MAN ACCORDING TO THE CLASSIFICATION OF CESARE LOMBROSO. Briefly Summarized by His Daughter, Gina Lombroso Ferrero. With an Introduction by Cesare Lombroso. Cloth. Price, $2. Pp. 322, with 39 illustrations. New York: G. P. Putnam's Sons, 1911.

TWENTY-FIRST ANNUAL REPORT OF THE VISITING NURSE ASSOCIATION OF CHICAGO. Incorporated November, 1890. For the Year Ending Dec. 31, 1910. Paper. Pp. 45. Office, Room 1408 Unity Building, 79 Dearborn Street. Mrs. H. K. Tenney, Secretary, Winnetka, Ill.

NINTH ANNUAL REPORT OF THE DIRECTOR OF THE BUREAU OF SCIENCE [MANILA] TO THE HONORABLE, THE SECRETARY OF THE INTERIOR. By Paul C. Freer, Director of the Bureau of Science. For the Year Ending Aug. 1, 1910. Paper. Pp. 70. Manila, 1911.

A RADIOGRAPHIC ATLAS OF THE PATHOLOGIC CHANGES OF BONES AND JOINTS. By Amédée Granger, M.D., Lecturer on Radiology and Electro-physics, New Orleans Polyclinic. Cloth. Price, $6. Pp. 207, with illustrations. New York: A. L. Chatterton Co.

MEDICAL DIAGNOSIS. By W. Mitchell Stevens, M.D., M.R.C.P., Fellow of University College, London. Cloth. Price, 25 shillings net. Pp. 1571, with 177 illustrations. London: H. K. Lewis, 136, Gower St., 1910.

DIE MASSENVERHÄLTNISSE DES HERZENS UNTER PATHOLOGISCHEN ZUSTÄNDEN. Pathologisch-Anatomische Untersuchungen. Von Sofus Widerøe. Paper. Pp. 143, with illustrations. Christiania: Jacob Dybwad, 1911.

EIGHTH ANNUAL REPORT OF THE BUREAU OF SCIENCE [MANILA] TO THE HONORABLE, THE SECRETARY OF THE INTERIOR. By Richard P. Strong. For the Year Ending Aug. 1, 1909. Paper. Pp. 62. Manila, 1910.

STYLE BOOK. A Compilation of Rules Governing Executive, Congressional and Departmental Printing... Including the Congressional Record. Cloth. Pp. 150. Washington: Government Printing Office, 1911.

THIRTY-FIFTH ANNUAL REPORT OF THE MANAGERS AND OFFICERS OF THE NEW JERSEY STATE HOSPITAL AT MORRIS PLAINS. For the Year ending Oct. 31, 1910. Paper. Pp. 50. Henry W Buxton, Secretary.

REPORT OF THE MILK COMMISSION OF PHILADELPHIA TO THE HON. JOHN E. REYBURN, MAYOR OF THE CITY OF PHILADELPHIA. Feb. 15, 1911. Paper. Pp. 125.

CORRECT ORTHOGRAPHY OF GEOGRAPHIC NAMES. Revised to January, 1911. Cloth. Pp. 168. Washington: Government Printing Office, 1911.